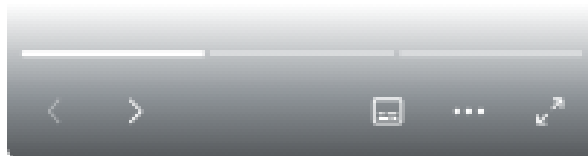


# **How to motivate students through a virtual character in the classroom**

To create our virtual avatar app, we used inventora.com's MIT.app development environment, an online platform for creating applications. This allowed us to create a character that interacts with students in the classroom.

The virtual avatar can motivate students by providing playback as encouragement throughout the class.

The purpose of this guidebook is to show you how the application was made, how to install and use it, and the purposes and interactions you can make.



## Installation

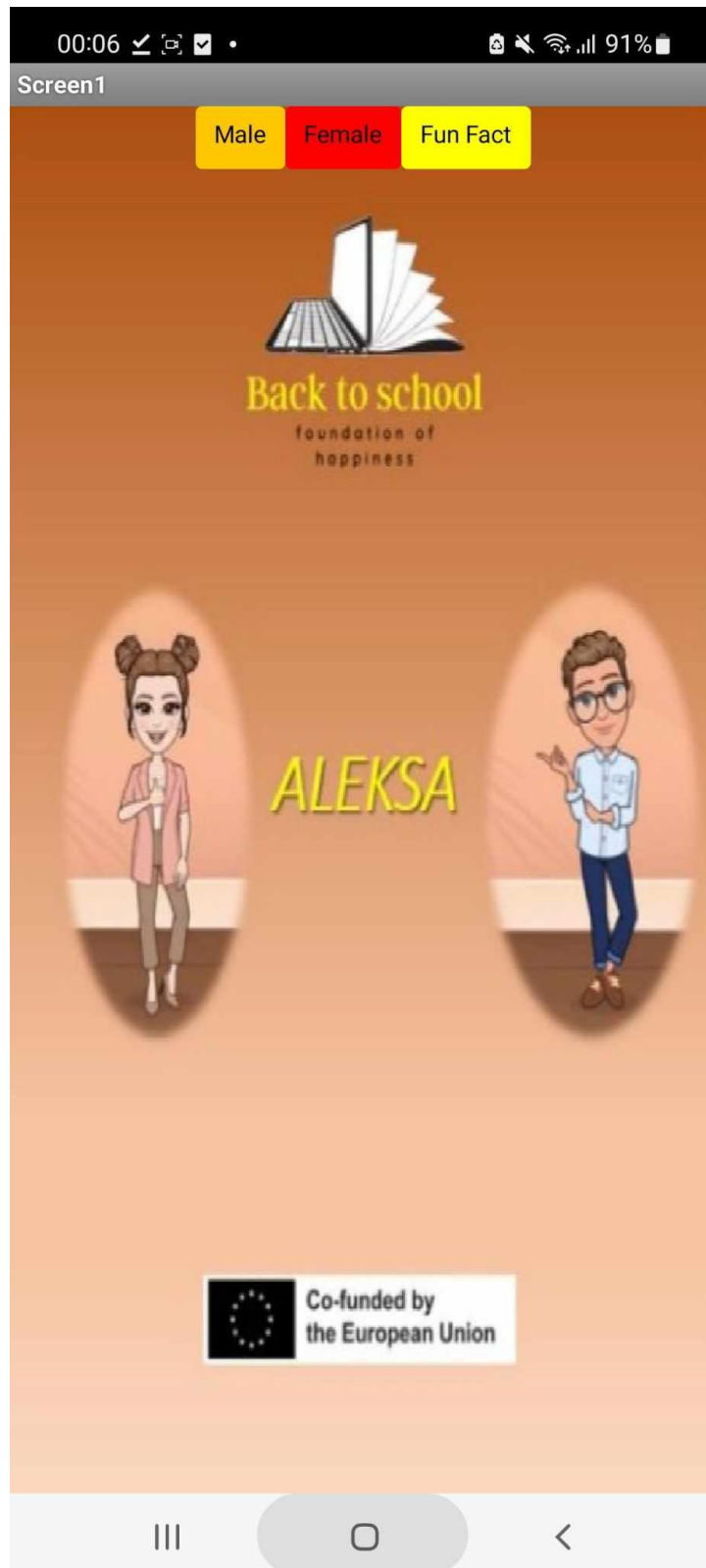
When you have opened the link or QR code, you need to select the package to install as shown in the picture.

1. Download
2. Download it anyway
3. Install anyway

Then you will get a question: „Do you want to install the application?” where you will select the option "Install".

- When you have started the installation, you need to wait 30 seconds for the application to install.

- After that, you will receive a notification that the application is installed, where you go to the "Open" option.

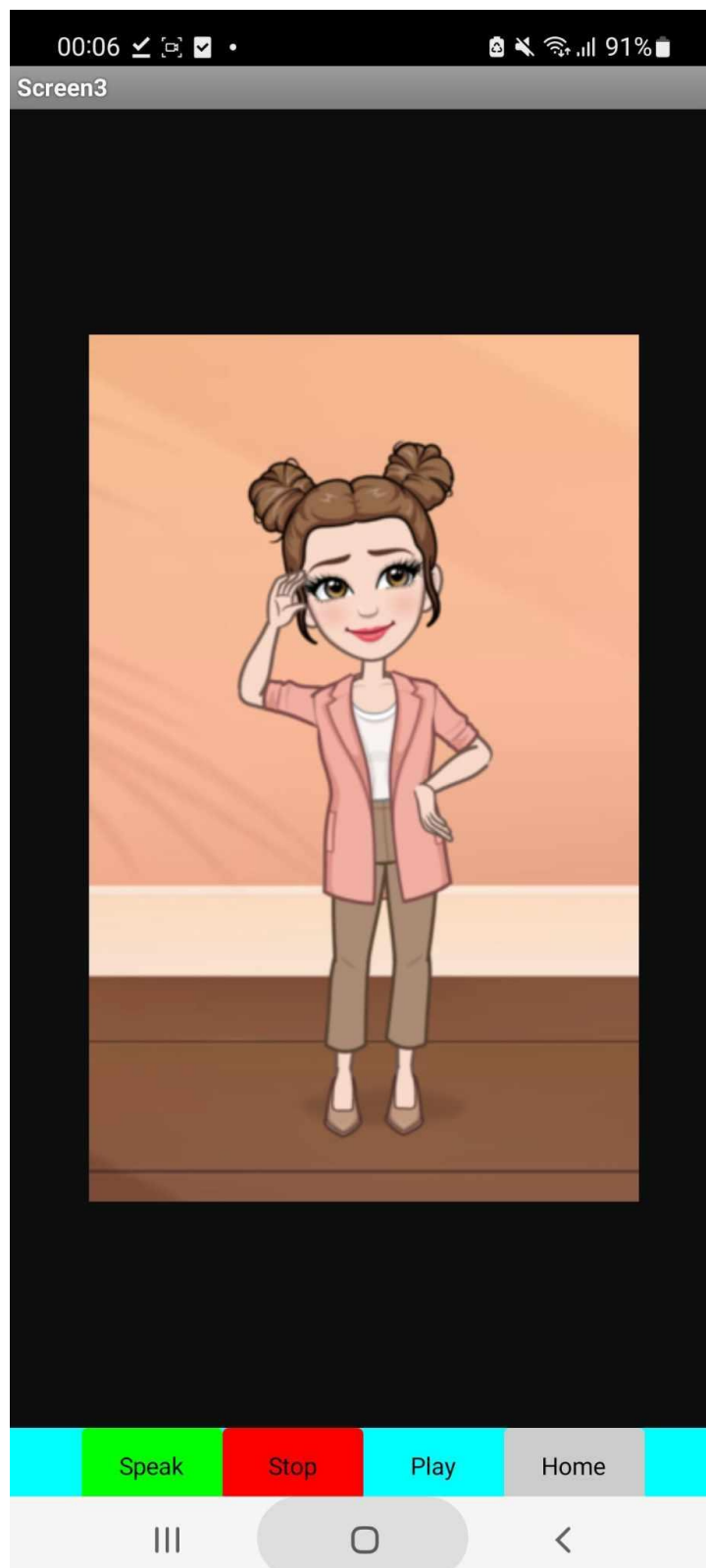


When you open the application, the initial menu will appear, where you can choose Alexa, male or female or you still want to read some interesting

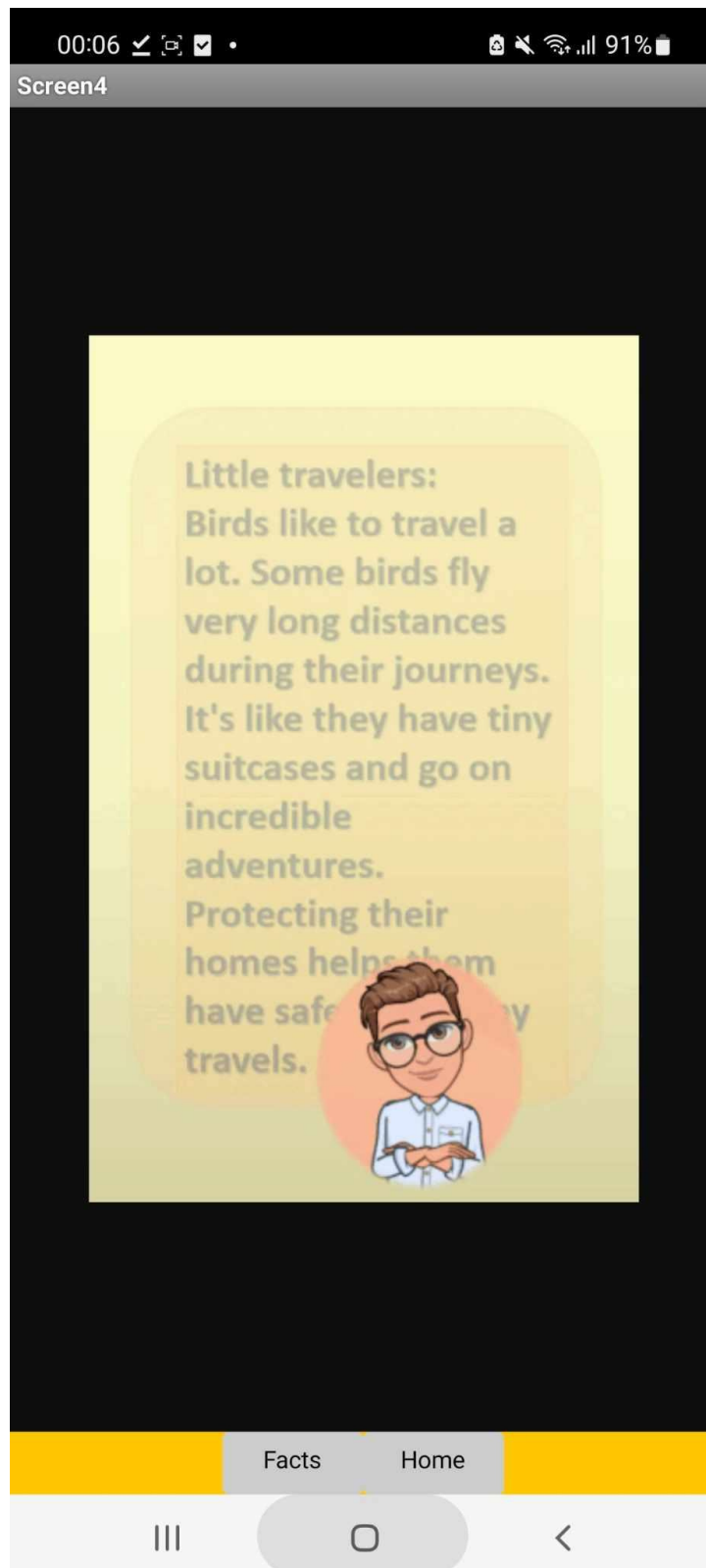
things



When you select the "male" option, the male character Aleksa will appear, and when you're done, go to the Home option to return to the home screen



When you select the „female" option, the female character Aleksa will appear, and when you're done, go to the Home option to return to the home screen

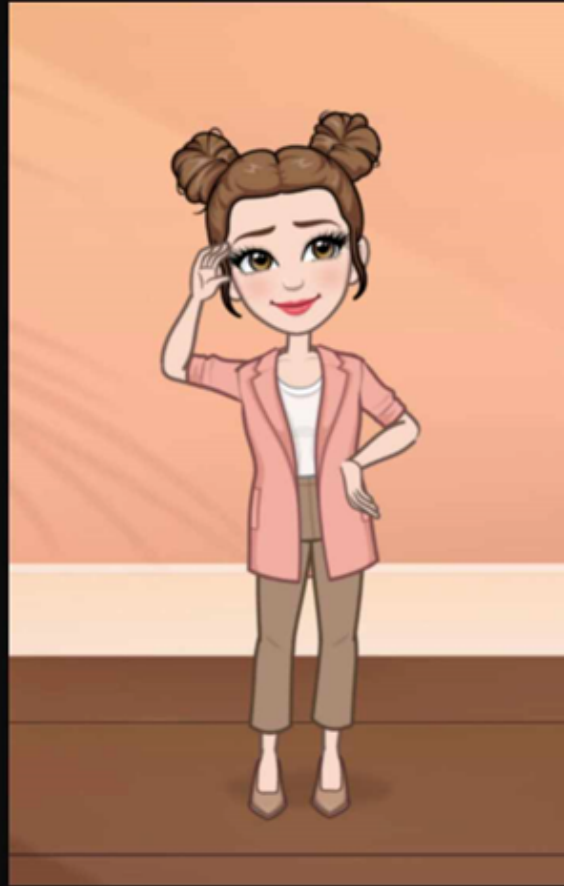


If you choose the "Fun fact" option - interesting things will open for you to read, and by clicking on the fact they change randomly, and if you have some facts of your own, submit them so that I can insert them or in your

native language. When you're done, go to the Home option to return to the home screen.



The virtual character Aleksa can listen to us when we start the "speak" option, and when we are done, we choose the "stop" option.



III    Speak    Stop    Play    Home    <





- When he has listened to us or recorded what we are saying, select the "Stop" option. To reproduce what we said, select the "Play" option.

21:02

čet, 27. april

Uprav. uređajem

Izlaz medija



Wi-Fi



Zvuk



Bluetooth



Autom. rotiraj



Avionski režim



Lampa



Mobilni podaci



Mob. prist. tačka



Štednja energije



Lokacija



Veza na Windows



Snimač ekrana





To record what Aleksa is saying, you need to go to the system recorder on your device and before pressing the "Play" option, turn on your recorder and when finished, the video is automatically downloaded to our gallery on the device. Due to the impossibility of direct recording in the application, we sent the application to Google Play and are waiting for a response.

## Exercises and examples of use

The App we have created can be used in many ways to motivate students through virtual avatars. In this part, we will discuss examples of how this App can be used effectively in a classroom setting.

1. **Encouragement Game:** Students can take turns saying positive affirmations or encouraging statements, which the avatar will repeat in a humorous voice.
2. **Storytelling:** Students can use the avatar to act out characters in a story they have created, with the avatar providing the voice for one of the characters.
3. **Presentations:** Students can use the avatar to practice public speaking, having the avatar ask questions or provide feedback on their presentation.
4. **Pronunciation Practice:** Students can practice pronunciation by saying words and phrases, and the avatar can repeat them in the playback voice to help with self-correction.
5. **Role Play:** Students can use the avatar to practice communication skills and social interaction, such as asking and answering questions, making small talk, and resolving conflicts.
6. **Improvisation:** Students can use the avatar to participate in improvisational games, such as creating a scene based on a given prompt or playing a "yes, and" game.
7. **Listening Practice:** Students can use the avatar to practice their listening skills, such as following instructions, answering questions, and retelling a story.
8. **Vocabulary Practice:** Students can use the avatar to practice vocabulary, such as using new words in sentences or practising pronunciation of challenging words.
9. **Reflective Practice:** Students can use the avatar to reflect on their learning and behaviour, such as setting goals, tracking progress, and celebrating successes.

10. **Memory Games:** Students can use the avatar to play memory games, such as remembering a list of items, repeating a pattern, or recalling a story.
11. **Fun facts about Ecology, Animals & Planet Earth:** Students can use the Avatar to learn educational facts about Nature!

## **General Use**

### **Step 1: Open the App (Review the Videos for detailed guidance on how to install)**

First, you'll need to open the Aleksa Virtual Avatar on your device. You can look for the app icon on your home screen or in your app drawer and tap on it to open it.

### **Step 2: Initialise the App**

Once you have opened the App, you will see a screen with various buttons and options. Press the "Init" button to initialise the App.

### **Step 3: Start the recorder**

After initialising the App, press the "Start" button next to the "Init" button to start the recorder. The app will ask permission to access your microphone when you press this button. Please give the app permission to access your microphone for the recorder to work.

### **Step 4: Enter the Virtual Character**

To use the Virtual Avatar, press the "Aleksa" button under the first line of buttons. This will take you to the Virtual Character interface.

### **Step 5: Start recording**

Press the "Record" button on the screen's left side to record your voice. Once you press the "Record" button, the App will start recording your voice, and the timer will begin. You can say any positive affirmation or encouraging statement you want the Virtual Avatar to repeat.

## **Step 6: Stop recording**

When you're done recording, press the "Stop" button in the middle of the Screen to stop the recording. The App will then stop recording your voice.

## **Step 7: Playback the recording**

To hear your recording, press the "Playback" button on the Screen's right side. The App will play back your recording, and the Virtual Avatar will repeat what you said in a humorous voice.

## **Step 8: Pass the turn to the next student**

After hearing the playback, could you pass the turn to the next student? The process can be repeated with all students taking turns to record and hear their playback.

## **Step 9: Exit the Virtual Character**

When you're done using the Virtual Avatar, press the "Exit" button at the top of the Screen. This will take you back to the main Screen of the App.

*That's it! With these steps, you and your students can use the Virtual Avatar to motivate and encourage each other during class.*

## **Encouragement Game 🙌**

The Encouragement Game is an interactive activity that can help boost students' self-esteem, motivation, and confidence. In this game, students take turns saying positive affirmations or encouraging statements, which the Virtual Avatar will repeat in a humorous voice.

Encouragement is essential to student success, and it matters because it can help students overcome negative thoughts, improve their mood, and increase their motivation to learn. When students feel encouraged and supported, they are more likely to take risks, engage in the learning process, and persevere through challenges.

The Encouragement Game effectively promotes positive self-talk and creates a safe and supportive classroom environment. It can help students build a growth mindset and resilience, essential skills for success in school and life.

Using a Virtual Avatar in the Encouragement Game can make the activity more engaging and interactive for students. By repeating the students' positive affirmations or encouraging statements in a humorous voice, the Virtual Avatar can add fun and excitement to the activity, making it more enjoyable and memorable for students.

Overall, the Encouragement Game with the Virtual Avatar effectively promotes positive self-talk, builds a growth mindset, and creates a supportive classroom environment. By incorporating this activity into the classroom, teachers can help students develop essential skills for success in school and beyond.

Here is a list of positive affirmations and encouraging statements that young students in school would appreciate hearing:

1. You can do this!
2. I believe in you.
3. You're making significant progress!
4. Keep up the excellent work!
5. You're so creative.
6. You're a problem solver.
7. You have a great attitude.
8. You're a team player.
9. You have a unique perspective.
10. You're a great listener.
11. You have a kind heart.
12. You're a hard worker.
13. You're a quick learner.
14. You're full of potential.
15. You're a fantastic friend.
16. You have a can-do attitude.

17. You're making a difference.
18. You're brave.
19. You're a natural leader.
20. You're an inspiration to others.
21. You have a great sense of humour.
22. You have many talents.
23. You're very responsible.
24. You have a big heart.
25. You're a problem solver.

These positive affirmations and encouraging statements can help students feel valued, appreciated, and motivated to do their best. By incorporating them into the Encouragement Game with the Virtual Avatar, students can have fun while building their self-esteem and confidence. Teachers can also encourage students to come up with positive affirmations and encouraging statements to share with their classmates, making the activity even more personalized and meaningful.

To use the Encouragement Game, follow the **First Five Steps of the General Use**, pick and say one of these 25 affirmations and hear the playback!

## Storytelling

Storytelling is an activity that involves sharing narratives or anecdotes with an audience. It is a fundamental part of human communication and has been used for centuries to entertain, educate, and inspire people.

Storytelling can also be a powerful tool for developing children's creativity, imagination, and language skills.

With the Aleksa Virtual Avatar, students can use it to act out characters in a story they have created, with the avatar providing the voice for one of the characters. This activity can help students bring their stories to life and create a more immersive and engaging experience for their audience.



Storytelling is essential for students to develop, as it can help them communicate their ideas and emotions effectively. It can also help them understand and empathize with other people's experiences and perspectives. Using the Virtual Avatar in Storytelling, students can explore different characters and their personalities, motivations, and challenges, which can help them develop their social-emotional skills.

Additionally, Storytelling can help students develop their language skills, including vocabulary, grammar, and syntax. By practising their storytelling skills with the Virtual Avatar, students can learn how to express themselves clearly and concisely, which can be helpful in their academic and personal lives.

In conclusion, Storytelling with the Virtual Avatar is an effective way for students to develop their creativity, imagination, language skills, and social-emotional skills. By incorporating this activity into the classroom, teachers can provide students with a fun and engaging way to develop these essential skills.

Here is a list of possible characters with names and a sentence they might say in the story:

1. Sammy the Squirrel: "I can't find my acorns. Can you help me?"
2. Luna the Lion: "I'm the jungle king and fearless!"
3. Oscar the Octopus: "I have eight arms, but I can't find my way out of this maze!"
4. Rosie the Rabbit: "I'm the fastest animal in the forest. Watch me run!"
5. Freddie the Fish: "I need to find my way back to the coral reef. Can you help me navigate?"
6. Pippin the Penguin: "I love sliding on the ice; it's so much fun!"
7. Max the Monkey: "I love to swing from the trees. Do you want to swing with me?"
8. Casey the Cat: "I'm a great hunter; watch me catch this mouse!"
9. Dexter the Dinosaur: "I'm a T-Rex, and I'm always hungry!"
10. Bella the Butterfly: "I love to fly and collect nectar from flowers. Can you join me?"

These characters can be used to create various stories, each with its unique plot, setting, and message. Students can use the Virtual Avatar to bring these characters to life and practice their storytelling skills by acting out their roles in the story. **Teachers can also encourage students to develop their characters and stories, making the activity more creative and personalized.**

To use the Storytelling, follow the **First Five Steps of the General Use**, pick one of these ten characters, say their sentences and hear the playback!

## **Presentations 🙌**

Presentations are an excellent way for students to learn how to speak in front of others and share their ideas. With the Education App's Virtual Avatar, you can help your students practice public speaking in a safe and supportive environment.

By using the avatar to ask questions or give feedback on their presentations, students can practice their speaking skills and improve their ability to communicate effectively. This can help your students develop their confidence and self-esteem, which is crucial for success in school and life.

Presentations can also help your students showcase their knowledge and ideas and develop their critical thinking and research skills. By presenting their work to an audience, students can receive feedback and constructive criticism, which can help them improve their work and presentation skills.

Incorporating the Virtual Avatar into your classroom activities can help your students become more confident, articulate, and effective communicators. This can positively impact their academic and personal lives and help them succeed in whatever they choose to do.

Here are some generic questions and positive feedback that the virtual App can provide during student presentations:

## Questions:

1. Can you tell us more about that?
2. What inspired you to choose this topic?
3. How did you prepare for this presentation?
4. What do you like about this topic?
5. What do you think is the essential part of your presentation?

## Positive Feedback:

- Great job on your presentation! You spoke very clearly and confidently.
- I loved the way you told your presentation. It made it very easy to follow.
- You did fantastically!
- You did an excellent job of answering questions.
- I'm impressed with how well you presented. You know your stuff!

To use the Presentations text, follow the **First Five Steps of the General Use**, pick one of these questions and feedback, say them and hear the playback!

## Pronunciation Practice 🗣️

Pronunciation Practice is essential to language learning, and students must speak clearly and confidently in their target language. The Education App's Virtual Avatar provides a fun and engaging way for students to practice their pronunciation skills by allowing them to say words and phrases, which the avatar can repeat back to them in the playback voice. This way, students can hear their pronunciation and compare it to the correct pronunciation, which helps with self-correction.

Pronunciation is a critical component of language learning, as it helps students to communicate more effectively in their target language. By

practising pronunciation, students can improve their ability to be understood by others, which is essential in both academic and personal settings. It can also help students feel more confident when communicating with others, leading to improved self-esteem and overall well-being.

The Virtual Avatar makes pronunciation practice more fun and engaging for students, as they can see their progress and receive real-time feedback. It also allows students to practice their pronunciation skills in a safe and supportive environment without fear of being judged or criticized. This can be especially important for students who may feel self-conscious about their pronunciation skills.

Sure! Here are some examples of complex words and sentences for young children to practice pronunciation with the App:

- Chameleon
- Hypothesis
- Accommodate
- Sympathetic
- Resilient
- Thorough
- Precipitation
- Friction
- Ecosystem
- Enthusiastic

1. The chameleon can change colour to blend in with its surroundings.
2. A hypothesis is an educated guess that scientists make before experimenting.
3. Our classroom can accommodate up to 30 students at once.
4. The teacher was sympathetic to the student's situation and offered to help.
5. The athlete was resilient and bounced back after losing the race.

6. The scientist conducted a thorough investigation to ensure accurate results.
7. Rain and snow are both types of precipitation that fall from the sky.
8. Rubbing your hands together creates friction and warmth.
9. An ecosystem is a community of living and non-living things that interact with each other in a specific environment.
10. The audience was enthusiastic and cheered loudly for the performers.

So that you know,, you can customize the words and phrases used in the pronunciation practice to meet the needs of their students. For instance, if teachers know that their students struggle with specific sounds or words in a particular language, they can focus on those areas. Additionally, the App can be used for practising pronunciation in any language, not just English.

Using the virtual avatar for pronunciation practice, students can receive immediate feedback and work on correcting their mistakes in a supportive and interactive environment. Over time, this can improve pronunciation and overall communication skills, which can benefit academic and personal settings.

## **Role Play**

Role Play is another feature of the Education App's Virtual Avatar, where students can use the avatar to practice communication skills and social interaction. Role Play is an activity where students take on a specific role or character and interact with others to develop their communication skills. It involves asking and answering questions, making small talk, and resolving conflicts.

Role Play can help students to develop their communication skills by providing a safe and supportive environment to practice social interaction. The avatar can provide feedback, suggestions, and tips to help students improve their communication skills, such as active listening and empathy.

The Role Play activity is similar to Storytelling in that it encourages students to engage with their imagination and creativity. Both activities can help students develop their communication and social skills, but they have different goals and objectives. Storytelling aims to help students create stories and practice speaking, while Role Play aims to help students practice communication and social interaction.

Role Play can be an effective tool for students who struggle with social interaction and communication. Using the avatar to practice conversation and social situations, students can develop the confidence and skills they need to interact with others in real-life situations.

In conclusion, Role Play with the Education App's Virtual Avatar is a valuable activity for students to practice communication skills and social interaction. The avatar provides a safe and supportive environment for students to practice conversation, empathy, and active listening. Role Play is similar to Storytelling and can be used similarly to help students develop their communication and social skills.

Students can use these characters to practice asking and answering questions, making small talk, and resolving conflicts. For example, they could act out a scenario where one character is upset with another, and they need to work together to find a solution. The Virtual Avatar can provide feedback and suggestions for handling different situations, which can help students improve their communication and social skills.

Here's short kids play that can be used with the virtual App:

### **Title: The Kindness Contest**

Characters:

- Sally, a young girl
- Max, Sally's friend
- Mr Lion, the judge of the kindness contest  
(The teacher can use the App to provide the voice of Mr Lion)

## **Setting: The playground**

### **Act 1:**

Sally and Max are playing on the playground when they see Mr Lion approaching them.

Mr Lion: "Hello, children! I am here to judge the kindness contest. The winner will receive a prize."

Sally and Max are excited to participate in the contest.

Mr Lion: "The contest is simple. You must perform as many kind acts as possible in the next hour. The person who performs the kindest acts will be the winner."

Sally and Max perform various acts, such as helping each other climb the monkey bars, sharing snacks, and picking up litter.

### **Act 2:**

At the end of the hour, Mr Lion returns to the playground to announce the winner of the kindness contest.

Mr Lion: "I am very impressed by both of your kind acts, but there can only be one winner. And the winner is..."

Sally and Max wait in suspense.

Mr Lion: "Both of you!"

Sally and Max are overjoyed to have tied for first place.

Mr Lion: "But remember, the real prize is the feeling of happiness and satisfaction that comes from being kind to others."

Sally and Max nod in agreement, understanding that the actual value of kindness lies in the act itself and not in any reward that may come from it.

**Moral:** The story's moral is that being kind to others is its reward, and we should always strive to be kind and compassionate to those around us.

Role-playing can also be fun for students to develop their creativity and imagination. By creating different characters and scenarios, they can explore new ideas and ways of thinking, which can benefit various academic and personal settings.

## **Improvisation** 😄

Improvisation is a fun and engaging way for students to develop their creativity, collaboration, and communication skills. Improvisational games involve creating a scene or story on the spot, often based on a prompt or suggestion from the group. Students can use the Education App's Virtual Avatar to participate in various improvisational games, including those that focus on character development, Storytelling, and teamwork.

One popular improvisational game is the "yes, and" game, in which one person makes a statement or suggestion, and the other responds by saying "yes, and" and adding a new idea to the story or scene. This game encourages students to be open-minded and supportive of each other's ideas while promoting quick thinking and creative problem-solving skills.

Another improvisational game is the "freeze" game, in which two people act out a scene, and at any point, a third person can shout "freeze!" and take over one of the characters, starting a new scene or continuing the story. This game can be fun for students to practice teamwork and collaboration as they work together to create a cohesive and engaging story.

By participating in improvisational games with the Virtual Avatar, students can develop their social and emotional skills and ability to think on their feet and respond quickly to unexpected situations. These skills can be helpful in various settings, including in the classroom, in social situations, and future careers.



Here is an example of a Yes, and improvisation game appropriate for young children.

**Description:** One player begins by saying a sentence with the phrase "Once upon a time." The next player then says, "Yes, and..." and adds another sentence to the story. Each player continues, building on the story with each new sentence.

The Virtual App with its playback feature can be used in the Yes and improvisation game in the following way:

1. The teacher or a student can start by providing a prompt, such as "You are at the zoo and have just been given the task of taking care of a baby monkey."
2. The first student starts the scene by saying, "I can't believe we have to take care of this baby monkey. It's going to be a handful!"
3. The avatar can then playback the first student's dialogue, allowing the next student to respond with "yes, and" - adding to the story.
4. The second student could respond with something like, "But look how cute it is! We need to make sure it's fed and has a safe place to play."
5. The avatar can then play back the second student's dialogue, and the game continues with each student building upon the previous response.

Using the avatar's playback feature, students can hear the previous response and continue the story, adding to the improvisation more dynamically. This can be especially helpful for students who may struggle with coming up with ideas on the spot, as it gives them more time to think about their responses while still keeping the game moving forward.

Overall, incorporating the Virtual App with its playback feature can make the Yes and improvisation game more engaging and fun for young students while also helping them to develop their creativity, communication, and social skills.

## Listening Practice 🧑🎧

Listening practice is essential to language learning, as it helps students develop their comprehension and communication skills. With the Virtual Avatar app, students can practice listening in a fun and interactive way. The app allows students to engage in various listening activities, such as following instructions, answering questions, and retelling a story.

Following instructions can improve students' ability to process and execute complex tasks. This skill is valuable both in academic settings, where students are often required to follow detailed instructions and in daily life, where they must follow instructions to complete everyday tasks.

Answering questions is also a critical listening skill, requiring students to process the information they hear and formulate a response. By practising this skill with the Virtual Avatar app, students can improve their ability to understand and respond to questions, which can be helpful in academic and personal settings.

Retelling a story is another valuable listening skill, requiring students to process information, identify important details, and organize their thoughts. By practising this skill with the Virtual Avatar app, students can improve their ability to comprehend and communicate complex information, which can be beneficial in various contexts.

In conclusion, the Virtual Avatar app can effectively improve students' listening skills, including their ability to follow instructions, answer questions, and retell a story. By incorporating this app into the classroom, teachers can provide students with a fun and engaging way to practice listening, which can help them improve their language skills and overall academic performance.

Here's a simple listening exercise appropriate for younger students using the playback feature of the app:

1. Start by recording a short story or a list of instructions using the playback feature of the app.
2. Have the students listen to the story or instructions carefully.
3. Then, ask the students questions about what they just heard to check their comprehension, such as "What did the character do first?", "What was the second thing the character did?", "What did the character say?", "What did the instructions say to do first?", "What did the instructions say to do next?" etc.
4. Encourage the students to retell the story or instructions using the playback feature of the app to help them practice their listening skills further.

## **Short Story**

One sunny day, a little girl named Lily was playing in the park with her friends. They decided to play a game of hide-and-seek. Lily ran to hide behind a tree but heard a faint meowing sound. She looked around and saw a tiny kitten stuck in a nearby bush. She quickly rescued the kitten and took it to a nearby animal shelter. The shelter found the kitten's owner, who was grateful to have their pet back.

## **Comprehension Questions:**

1. What was the little girl's name?
2. What game did the children decide to play in the park?
3. Where did Lily hide during the game of hide-and-seek?
4. What did Lily hear while she was hiding?
5. What did Lily do when she heard the meowing sound?
6. Where did Lily take the kitten?
7. Was the kitten able to find its owner?
8. How did the owner feel when they got their pet back?

This exercise can help young students improve their listening skills, memory, and comprehension, while also providing an opportunity to practice using the app's playback feature.

## Vocabulary Practice

Vocabulary practice is an essential component of language learning. It helps students expand their knowledge and understanding of new words and expressions, which can significantly enhance their communication skills. With the Education App's Virtual Avatar, students can practice vocabulary in a fun and engaging way.

The app offers various activities to help students learn new words and expressions, such as using them in sentences, identifying them in context, and learning their definitions. Additionally, the avatar can provide feedback on pronunciation and help students practice using words correctly.

Practising vocabulary can also be beneficial for reading and writing skills. By expanding their vocabulary, students can better understand the meaning of texts and express themselves more clearly in their writing.

In conclusion, the Virtual Avatar can be a valuable tool for students to practice vocabulary and enhance their communication skills. With its various activities and features, the app provides a fun and engaging way for students to learn and practice new words and expressions.

Here's an example of a vocabulary exercise for young children using the Virtual App:

1. Choose a set of vocabulary words appropriate for the age and language level of the students—for example, cat, dog, bird, fish, rabbit, frog, lizard, snake.
2. Have the students practice saying each word with the help of the Virtual App's playback feature. They can say the word, listen to the playback, and then try to improve their pronunciation based on what they heard.
3. Next, the students can use the Virtual App to practice using the vocabulary words in sentences. The app can give them prompts, such as "Can you make a sentence with the word 'cat'?" or "How about a sentence with the word 'frog'?"

4. Students can develop a short story or conversation using the vocabulary words as a group. For example, they can create a story about a cat and a dog who become friends and go on an adventure together.
5. To wrap up the exercise, have the students use the vocabulary words creatively, such as drawing pictures of the animals and labelling them with the corresponding words.

Overall, the Virtual App is useful for helping young students build their vocabulary and improve their pronunciation. By practising with the app's playback feature and using the words in various contexts, students can develop their language skills engagingly and interactively.

## **Reflective Practice**

Reflective practice is an integral part of the learning process. It encourages students to think about their actions, analyze their learning, and decide if they are meeting their goals. Through reflection, students can develop self-awareness and learn from their experiences. Reflective practice allows students to recognize and address weaknesses, identify potential solutions, and develop skills for self-improvement.

By engaging in reflective practice, students can discover new perspectives, improve their problem-solving skills, and set realistic goals. Reflective practice can also improve communication, collaboration, and teamwork. Reflective practice helps students become more successful in their academic and personal pursuits.

A young student can use the virtual avatar to practice self-reflection after completing a task. The student can record their voice using the avatar to describe the activity, what they learned, and what they need to work on next. The avatar can then play back the recording for the student to hear their reflections and recognize areas for improvement. This can help the student to identify their strengths and weaknesses and develop strategies for

improving their performance. The avatar can also provide positive reinforcement by playing back encouraging messages from the student.

Here are three scenarios based on classes that you can use:

### **Math:**

Teacher: What did you learn about math today?

Student: I learned about geometry and how to calculate the area of different shapes.

Teacher: What is the formula for finding the area of a triangle?

Student: The formula for finding the area of a triangle is  $A = (1/2) \times b \times h$ .

### **Nature:**

Teacher: What did you learn about nature today?

Student: I learned about the different parts of a plant and how they help it survive.

Teacher: What are the three main parts of a plant?

Student: The three main parts of a plant are the roots, stem, and leaves.

### **Reading:**

Teacher: What did you learn about reading today?

Student: I learned about types of stories and the elements of a story, like characters, setting, and plot.

Teacher: What is the difference between narrative and expository stories?

Student: A narrative story tells a story through characters and events, while an expository story provides facts and information.

The best practice is to ask the student one question and then record the answer on Aleksa Virtual Character. Afterwards, play it back and hear it together!

Reflective practice is a valuable tool that can be used in the classroom setting to help students gain insight into their learning and practice self-reflection. It enables students to become more self-aware, develop problem-solving skills, and set realistic goals. By allowing students to record their reflections, they can better understand their strengths and weaknesses and learn how to improve their performance. With the help of Aleksa's Virtual Avatar, students can practice self-reflection in a safe and supportive environment.

## **Memory Games**

Memory games are an effective way for students to improve their memory, concentration, and cognitive abilities. Using the educational app's virtual avatar, students can play various memory games that challenge them to remember and recall information accurately.

One of the key benefits of memory games is that they can help students to retain information more effectively. By playing games that require them to remember lists of items, patterns, or stories, students can develop their memory and concentration skills, which can be beneficial in various academic and personal settings.

Memory games can also help students improve their cognitive abilities, such as attention span and problem-solving skills. By playing games that require them to recall information accurately, students can develop their critical thinking and analytical skills, which can be helpful in various subjects.

The virtual avatar in the Education App can provide an engaging and interactive way for students to play memory games. By incorporating

memory games into the classroom, teachers can help students to develop their memory, concentration, and cognitive skills in a fun and engaging way.

In conclusion, memory games with virtual avatars effectively improve students' memory, concentration, and cognitive abilities. By incorporating this activity into the classroom, teachers can provide students with an engaging and interactive way to practice their memory skills, which can be beneficial in various academic and personal settings.

Sure, here's an example of a memory game that could be played using the virtual avatar and its playback capabilities:

- The avatar will say a list of three to five items, such as "apple, pencil, book, and hat." (After being recorded by the teacher)
- The student will then repeat the list to the avatar, using the same order as the original list.
- The avatar will playback the list to the student, so they can confirm if they remembered all the items in the correct order.
- If the student correctly remembers all of the items, the exercise is complete if the teacher decides so
  - The teacher can use several lists for a more extended exercise.

## **Exercise 1**

### **Memory Game:**

1. Apple
2. Bicycle
3. Carrot
4. Dolphin
5. Eggplant
6. Flamingo
7. Guitar



8. Hippopotamus
9. Ice cream
10. Jellyfish
11. Kangaroo
12. Lemon
13. Mushroom
14. Narwhal
15. Octopus

With the playback capabilities of the app, the teacher can say the list of items and have the students repeat them back in order. We suggest starting with three to five items and gradually recording more so the student can get as many in the correct order.

## **Exercise 2**

### **Memory Game with Sentences:**

1. The cat sat on the windowsill.
2. The dog chased the ball.
3. The bird sang a sweet song.
4. The flowers bloomed in the garden.
5. The sun set behind the mountains.
6. The rain fell softly on the roof.
7. The wind blew through the trees.
8. The Butterfly landed on the flower.
9. The moon shone brightly in the sky.
10. The stars twinkled in the night.

With the playback capabilities of the app, the teacher can say the sentences and have the students repeat them back in order. As the students improve, the teacher can add more sentences. We recommend starting with one and adding more later on.

This game can be adapted to make it more challenging by increasing the length of the list or by adding more difficult items to the list. The app's

playback feature helps students check their memory and correct any mistakes they make. Memory games are a fun and engaging way for students to improve their short-term memory skills, which can be helpful in many areas of their academic and personal lives.

## **Fun Facts about Ecology, Animals & Planet Earth**

Here are 80 facts you can learn from, tell and hear from Aleksa!

### **Ecology:**

1. Ecology is the science of how living things interact with each other and their environment.
2. There are five main types of ecology: organismal, population, community, ecosystem, and global.
3. Every living organism has a 'niche': its specific role in the ecosystem.
4. Plants convert sunlight into food through a process called photosynthesis. They're the only organisms that can do this!
5. The largest living structure on Earth is the Great Barrier Reef, which is so big it can be seen from space.

### **Animals:**

6. The blue whale is the largest animal ever to have lived on Earth, even bigger than the biggest dinosaurs.
7. Some birds, like pigeons, can recognize themselves in a mirror.
8. Octopuses have three hearts. Two pump blood to the gills, while one pumps it to the rest of the body.
9. Cows have best friends and can get stressed when separated.
10. The tongue of a blue whale is so large that 50 people could stand on it.

## **Planet Earth:**

11. Earth is the only planet not named after a god.
12. It takes 8 minutes and 20 seconds for light to travel from the Sun to the Earth.
13. Earth is the only known planet to support life.
14. More than 7.5 billion people are living on Earth.
15. About 70% of the Earth's surface is covered in water.

## **Plants:**

16. The oldest tree in the world is almost 5,000 years old.
17. Strawberry is the only fruit that bears its seeds on the outside.
18. Trees are the longest-living organisms on earth.
19. Bamboo is the fastest-growing woody plant in the world; it can grow 35 inches in a single day.
20. The first potatoes were cultivated in Peru about 7,000 years ago.

## **Ecology:**

21. More than 25% of the medicines we use originate in rainforest plants.
22. One tree can absorb as much carbon in a year as a car produces while driving 41,840 kilometers.
23. Oceans provide 99% of the Earth's living space- the largest space in our universe known to harbor life.
24. It takes a 15-year-old tree to produce 700 grocery bags.

25. Biodiversity is crucial for our survival and well-being. It provides us with clean air, fresh water, food, and medicine.

### **Animals:**

26. Ants never sleep, and they also don't have lungs.

27. A snail can sleep for three years at a stretch.

28. The star-nosed mole can eat worms faster than the human eye can follow – in just 225 milliseconds.

29. An elephant's tooth can weigh over 2.7 kilograms.

30. The chameleon can move its eyes in two directions at the same time.

### **Planet Earth:**

31. Earth has a powerful magnetic field due to its nickel-iron core.

32. It's estimated there are over 1 million Earthquakes each year, most are too small to feel.

33. The Earth's rotation is gradually slowing, at about 17 milliseconds per hundred years.

34. Earth has traveled more than 8,000 kilometers in the past 5 minutes.

35. There is enough gold in Earth's core to cover the planet's entire surface in 0.46 meters of gold.

### **Plants:**

36. The smell of freshly-cut grass is actually a plant distress call.

37. There are over 200,000 identified plant species and the list is growing all

the time.

38. An average size tree can provide enough wood to make 170,100 pencils.

39. Peaches, pears, apricots, quinces, strawberries, and apples are members of the rose family.

40. More than half of plant species are native to just one country.

### **Ecology:**

41. Recycling one glass jar saves enough energy to watch TV for 3 hours.

42. Deforestation is the second leading cause of global warming.

43. Coral reefs are the largest structures on earth of biological origin.

44. Earthworms are excellent at improving soil fertility.

45. 75% of the world's food is generated from only 12 plants and five animal species.

### **Animals:**

46. The blood of a spider is blue.

47. A group of flamingos is called a "flamboyance."

48. A chameleon's tongue is twice as long as its body.

49. An ostrich's eye is bigger than its brain.

50. A shrimp's heart is in its head.

### **Planet Earth:**

51. The deepest known area of the Earth's oceans is known as the Mariana Trench. Its deepest point measures 11 kilometers.
52. There is a planet made of diamonds twice the size of Earth called 55 Cancri e.
53. The Sahara desert at one time was lush grassland and savannah.
54. The largest volcano on earth is the Mauna Loa in Hawaii.
55. There are more living organisms in a handful of soil than there are people on earth.

### **Plants:**

56. The Elephant grass found in Africa is named so as it is 4.5 meters high and even elephants can hide in it!
57. The baobab tree found in Africa can store 1,000 to 120,000 liters of water in its swollen trunk!
58. Around 2000 different types of plants are used by humans to make food!
59. The Amazon rainforest produces half the world's oxygen supply!
60. The tallest tree ever was an Australian eucalyptus. In 1872 it was measured at 435 feet tall!

### **Ecology:**

61. It takes about 2,045 liters of water to produce one chicken egg.
62. A single tree produces approximately 118 kilograms of oxygen per year.
63. Earth's biodiversity is decreasing, with species going extinct between 1000 to 10,000 times faster than nature intends.
64. The sea provides Over 80% of the world's diet.

65. Wetlands are crucial for our survival while making up only 6% of the Earth's land surface. They absorb pollutants and improve water quality.

### **Animals:**

66. Every dog has a unique nose print with no two alike.

67. Cats have over one hundred vocal sounds, while dogs have about ten!

68. Hummingbirds are the only birds that can fly backwards.

69. Slugs have 4 noses.

70. A newborn kangaroo is the size of a lima bean.

### **Planet Earth:**

71. Earth rotates at around 1000 miles an hour

72. You could fit a million Earths in the Sun

73. The driest place on Earth sits adjacent to the biggest body of water.

74. Humans may weigh differently depending on where they stand.

75. One stroke of lightning heats the air to about 30,000 degrees Celsius.

### **Plants:**

76. Some plants have adapted to defend themselves from animals.

77. The English word 'banana' is derived from the Arabic word 'banan', which means "finger".

78. The oceans contain about 85% of all plant life on Earth.

79. Apples float on water because they are 25% air

80. A sunflower is actually made of hundreds of tiny flowers called florets, each of which ripens into a seed.

## About the Application & MIT App Inventor



# Back to school

foundation of  
happiness

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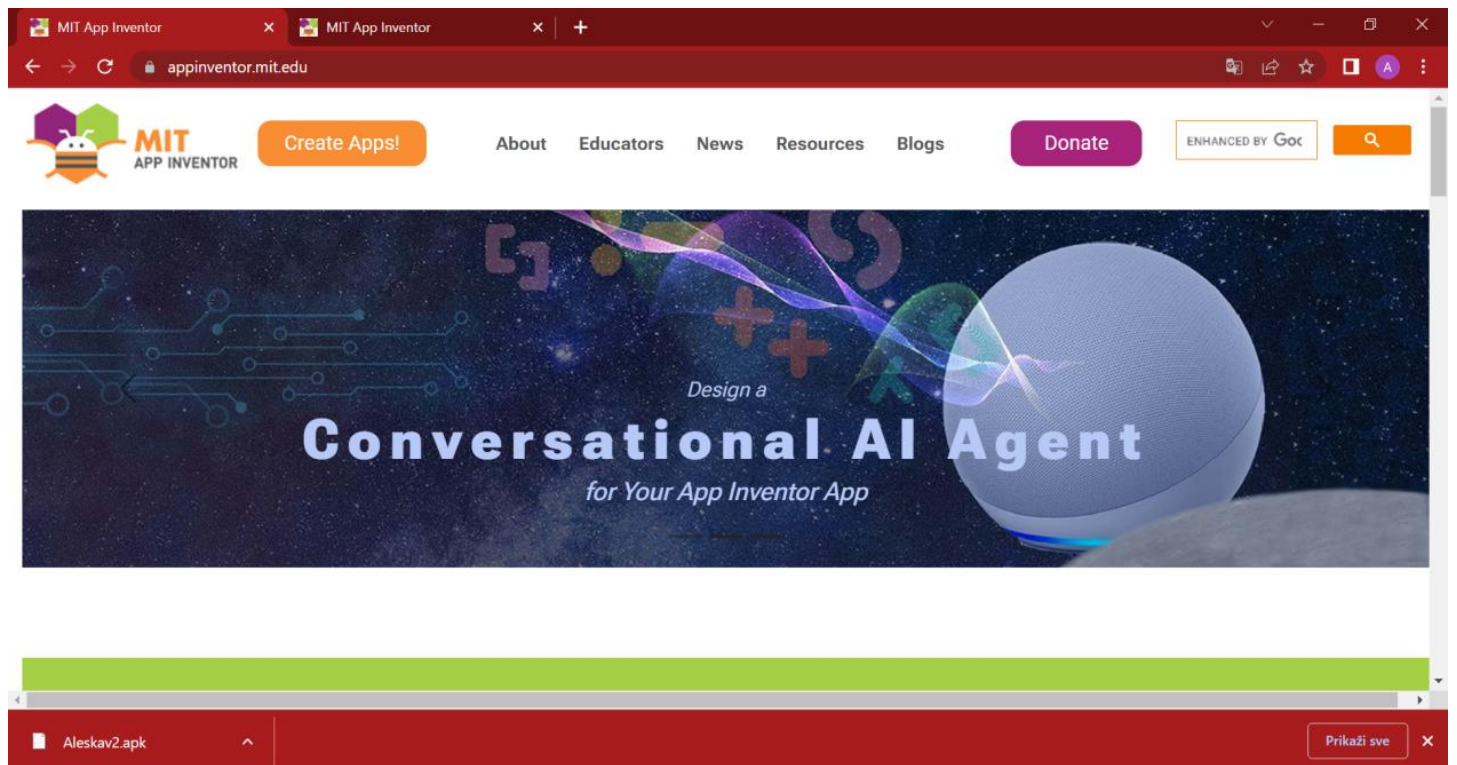


### Concept

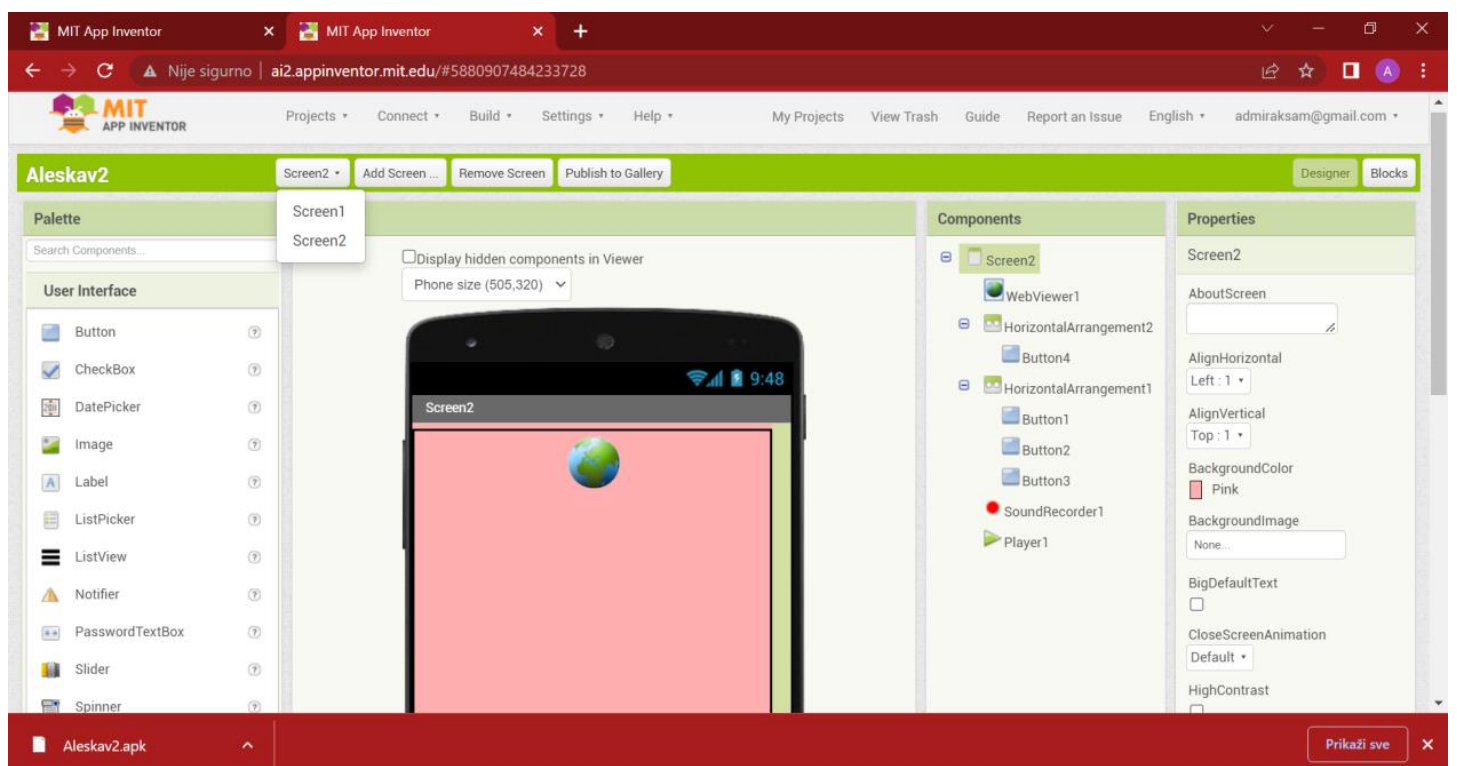
To create our avatar, we used inventora.com's mit. app development environment, an online

a platform for creating applications.

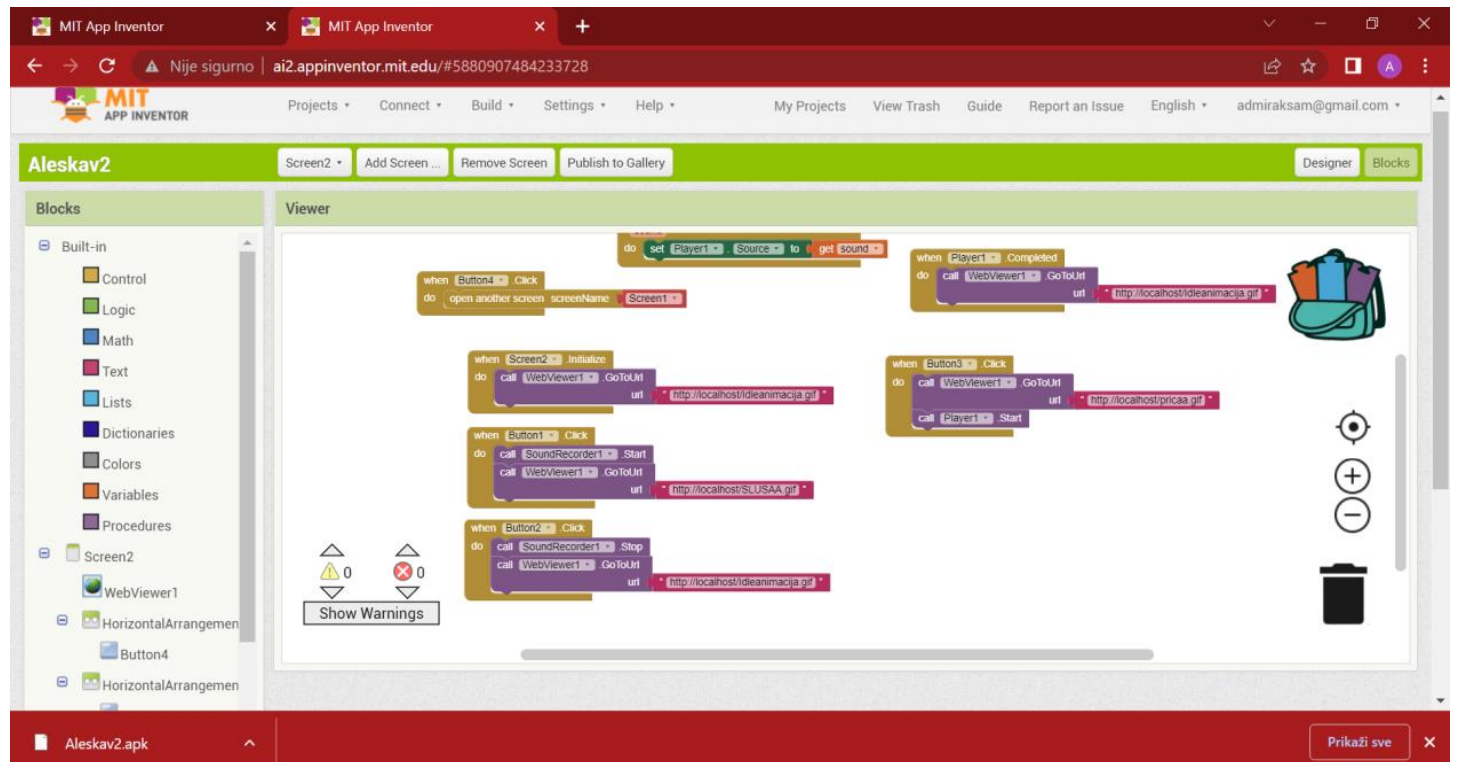




The application consists of two screens, Screen 1 and Screen 2. The first Screen is for initialising the recorder, and the second is for the avatar itself. Essential elements from the UI palette of the app inventor itself were used.



The programming itself is block-based, thus providing the possibility of simple manipulation with the elements in the application.



## Thank you!

Thank you for exploring the many features of our virtual app for young students! We hope the examples, scenarios, and exercises we provided are fun and engaging for your students. Our goal is to help them improve their communication and language skills in a way that feels exciting and motivating. With the help of the app, students will have a great time practicing and mastering different areas of language learning. We appreciate your interest in our app, and we look forward to hearing about your student's progress!

