HOUR OF AI

Activity 1: Hello Moon

STUDENT ACTIVITY GUIDE

STEP 1 PREVIEW YOUR MISSION

In today's coding activity, you will code an Alexa skill using voice AI that can say, "Hello, Moon."

MISSION CHECKLIST

- ❑ I created a new project in MIT App Inventor.
- ❑ I added an **intent** with at least three **utterances**.
- ❑ I added a **function** to tell Alexa what to do when "SayHiIntent" is run.
- ❑ I tested the Alexa skill using at least three different **utterances**.

MISSION CODE

This is your final program code. Reference this as needed as you follow along the steps of this activity:

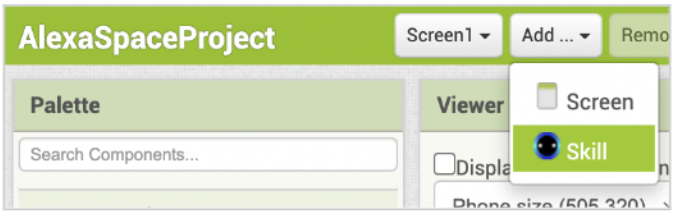
STEP 2 READY, SET...GO!

Code an Alexa Skill using voice AI that can say, "Hello Moon."

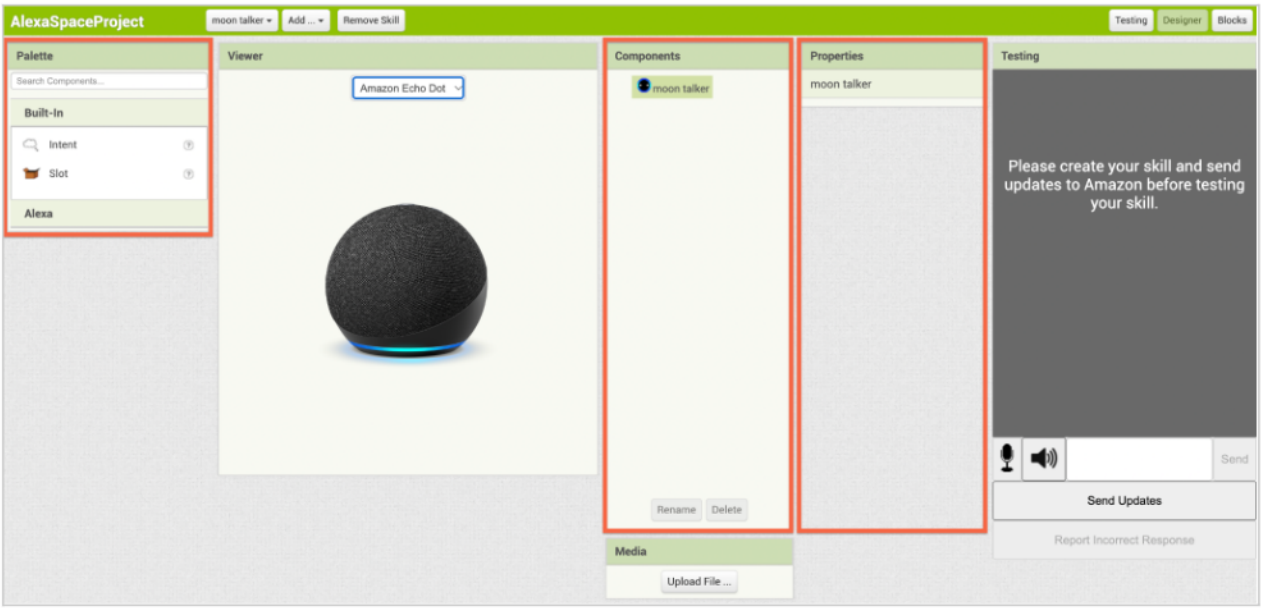
A – SET UP YOUR PROJECT

1. Go to https://hourofai.appinventor.mit.edu/login
2. **Enter your credentials** from the student login card your teacher handed out.
3. Select "My Projects" from the top menu. Then, click the "Start New Project" button to start a new project.
    - **Make sure you zoom your screen to 80% so you can see the entirety of the MIT App Inventor screen.**
4. Name your project: "AlexaSpaceProject."

B – ADD A SKILL



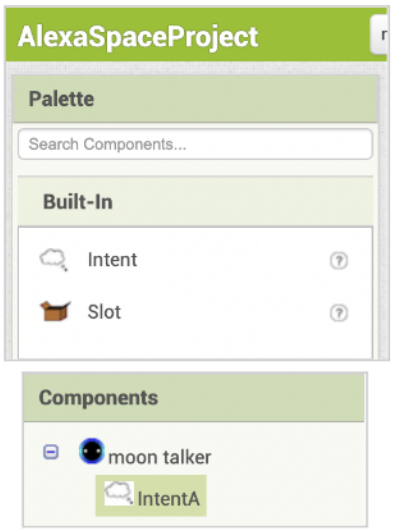
5. Switch from the cell phone shown on the screen to the Alexa coding screen by clicking on "Add" and then "Skill."
6. Give the skill a unique name, like "moon talker."
    - *Note: You'll use this name later on to tell Alexa to open this specific skill and run your program.*
7. Check that you can now see the Amazon Echo Dot image on the screen instead of the cell phone. This means you are in what is called Design Mode in App Inventor.



The three circled areas shown here are the panels you'll use in the next two parts — the Palette, Components, and Properties panels.

C — ADD YOUR INTENT

Before you can start working with the code blocks, you need to add the components to be programmed! You'll add an **Intent** component to tell Alexa what we want it to do. Then, you'll add at least three **utterances** (the possible commands we might say to Alexa) to this component.

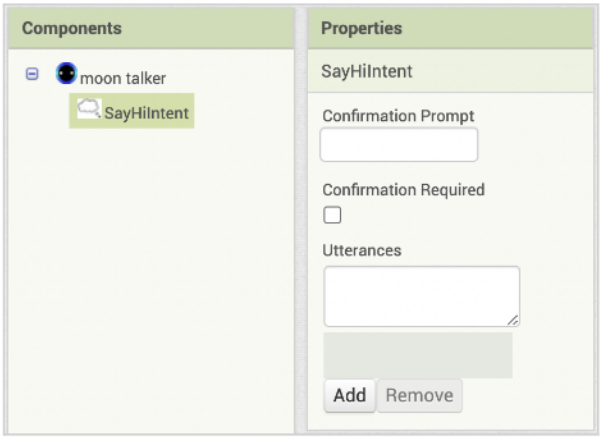


8. Look at the Palette panel on the left-hand side and find the **Intent** component.
9. Click-and-drag the Intent component from the Palette over to the image of the Alexa device in the center. You should now see **IntentA** listed under the Components panel.

D — PROGRAM THE UTTERANCES

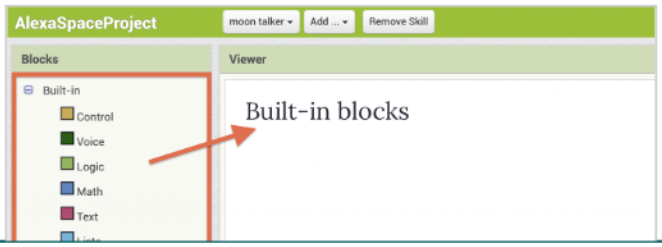
Now, you need to program the properties for your **Intent** using the Properties panel.

10. Make sure that **IntentA** is selected in the Components panel by clicking on it.
11. Then, click the "Rename" button at the bottom of the panel and give it a more specific name, like "SayHiIntent."
12. Next, you need to program the **utterances** so try to think of at least three different ways an astronaut might ask Alexa to say, "Hello Moon."
    - *Note: Do NOT use the phrase, "Say hello to the moon." You'll be using this later while testing your program with unprogrammed phrases.*
13. Type the first of your phrases into the "Utterances" space of the "Properties" panel and click the "Add" button.
14. Repeat this for each of the phrases you came up with.



E — ADD YOUR CODE

With the component set up, you're ready to start building the code that makes your Alexa skill work! You're going to build a function (a



block of reusable code that performs an action) to tell Alexa what to do.

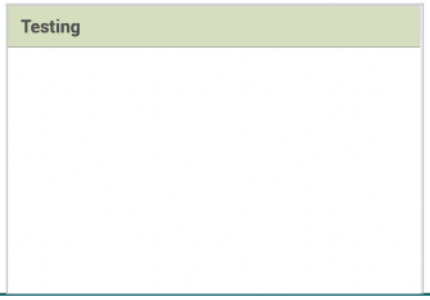
15. First, switch to the Blocks view by clicking on the "Blocks" button near the upper right-hand corner.
16. Look for the section of the Blocks panel that contains the blocks for your Intent "moon talker" and click on "SayHiIntent."
17. From the panel that pops up, click-and-drag the gold **when SayHiIntent.spoken** block to the empty Viewer panel in the center of the screen.

18. Next, go to the Blocks panel area with the built-in blocks and select the green "Voice" category.

19. From the panel that pops up, click-and-drag the **say** block to the Viewer panel and place it into the empty space in the middle of the **when SayHiIntent.spoken** block.
20. Finally, select the "Text" category from the Blocks panel.
21. Locate and drag the **empty string** block  and place it next to the **say** block so that the notches lock together.
    - Note: A string is a series of characters, like letters or numbers.
22. Type what you want Alexa to say into the **empty string** block. You can use any greeting, such as "Hello, moon!"

F – TEST YOUR ALEXA SKILL

Now, you're ready to test out your Alexa skill! You'll use the Testing panel on the right-hand side of the screen to do this.



23. In the Testing panel, click the "Send Updates" button to send your code to the cloud for Alexa to use. Wait until the prompt in the gray box says that it is finished building your skill to move to the next step.

24. Test your program by giving it commands by using the microphone or typing into the textbox. Remember to tell Alexa to open your skill by name and then say your utterance as shown here:

25. Next, try to throw Alexa a curveball! See if it will respond correctly to an utterance that you didn't program such as, "Say hello to the moon."
    - Remember, Alexa uses machine learning to compare your utterances and intent to millions of other people's utterances. Sometimes Alexa may not get it right but the AI is always learning and improving.

G – REVIEW YOUR CHECKLIST

- ❏ I created a new project in MIT App Inventor.
- ❏ I added an **intent** with at least three **utterances**.
- ❏ I added a **function** to tell Alexa what to do when SayHiIntent is run.
- ❏ I tested the Alexa skill using different **utterances**.

APPENDIX VOCABULARY

Find this lesson's vocabulary below.

ARTIFICIAL INTELLIGENCE (N):
A branch of computer science that can help solve problems and address challenges in incredibly new ways.

FUNCTION (N):
A block of reusable code used to perform an action.

INTENT (N):
The desired response to a question or command made to a voice AI.

UTTERANCE (N):
A question or command a user makes to a voice AI.

STRING (N):
A series of characters like letters or numbers.

VARIABLE (N):
A value that can change.

VOICE AI (N):
Technology that recognizes human voices, interprets their meaning, and offers a response in return.

WAKE WORD (N):
A pre-programmed word that triggers a voice AI device.