Activity: Creating a Text-to-Speech App using MIT App Inventor

Objective:

To design a simple Android application that converts user input into spoken words using the TextToSpeech component.

Tools Needed:

- A computer with a web browser

- MIT App Inventor (https://ai2.appinventor.mit.edu/)

- Android phone (for testing)

App Components Used:

Visible:

- - 1 TextBox – for user input
- - 2 Buttons – labeled "OKAY" and "EXIT"
- - Layouts: HorizontalArrangement and VerticalArrangement for alignment
- Non-visible:
- - TextToSpeech1
- - Sound1 (optional, for sound effects)
- - Notifier1 (optional, for showing alerts)

Steps to Build the App:

1. Design the Interface

In the Designer view:

- - Drag and drop:
- - A TextBox for input (name it TextBox1)
- - Two buttons (Button1 = “OKAY”, Button2 = “EXIT”)
- - Drag TextToSpeech component from Media to the Viewer (will appear under Non-visible components)

2. Set Component Properties

- TextBox1: Hint = “Enter text here…”

- Button1: Text = “OKAY”

- Button2: Text = “EXIT”

Testing:

1. Connect your phone via AI2 Companion.

2. Enter any text in the textbox.

3. Tap "OKAY" – the app should print the text.

4. Tap "OKAY" – the app should read the text aloud.

5. Tap "EXIT" – optional sound and app closes or shows an alert.

Learning Outcomes:

- Understand how TextToSpeech works.

- Learn to trigger actions with button clicks.

- Work with non-visible components in MIT App Inventor.