SAINT LUCIA CONNECTED DIGITAL SKILLS YOUTH INTERNSHIP
Digital Skills Training

Workshop Title: Mobile App Development: Building with Google AppSheet

Prerequisites:

1. Basic knowledge of Google sheets or spreadsheets in general.
2. Working knowledge of Google Drive
3. Good communication skills.
4. The willingness to take on a new challenge
5. The ability to work with a team.

Description:

This workshop is designed to introduce students to the basics of app development using Google AppSheet. Over the course of 12 hours, students will learn how to create a task tracker app from scratch. They will gain hands-on experience in setting up data, designing user interfaces, and implementing automation features. By the end of the workshop, students will have a functional task tracker app that they can customize and expand upon.

Learning Outcomes:

In this workshop participants will:

1. Understand the fundamentals of app development with Google AppSheet.
2. Set up data in a Google Sheet and connect it to AppSheet.
3. Design intuitive user interfaces for app navigation and data entry.
4. Implement logic and automation features to enhance the functionality of the app.
5. Customize the app's branding, appearance, and behavior.
6. Gain confidence in building simple apps using interfaces such as Google Appsheet.

Workshop Details

Session	Learning Outcomes	Suggested Activities
	Understand the fundamentals of app development with Google AppSheet. Set up data in a Google Sheet and connect it to AppSheet.	**Introduction (30minutes)** 1. Introduce the concept of app development and explain the purpose of building a contract management app. 2. Discuss the benefits of using Google AppSheet for no-code app development. 3. Provide an overview of the activity and the desired outcome. 4. Use an interactive presentation to explain how Appsheet works. **Spreadsheet Setup (30 minutes)** 1. Explain the importance of structuring data in a spreadsheet. 2. Provide a sample contact list spreadsheet or guide participants to create their own. 3. Instruct participants to organize the data with columns representing different contact information (e.g., name, phone number, email). 4. Emphasize the need for well-formatted column headers and data validation rules. About AppSheet Make an "AppSheet-friendly" spreadsheet **App Creation and Data Connection (60 minutes)** 1. Walk participants through the process of creating a new app using Google AppSheet. 2. Show them how to connect their contact list spreadsheet as a data source.

		3. Guide participants in configuring the app to use the appropriate worksheet containing the contact data. Creating a Basic App using AppSheet App design 101 **UI Design and App Customization (80 minutes)** 1. Introduce UI design principles, including UX considerations. 2. Instruct participants to customize the appearance of their app, including theme, colors, fonts, and format rules. 3. Encourage participants to experiment with different views (e.g., table view, form view) to display and capture contact information. 4. Guide participants to customize or delete automatic views and configure the starting view and column order. App design: The Essentials **Testing and Deployment (40 minutes)** 1. Instruct participants to preview their app's functionality within the AppSheet Editor. 2. Encourage them to test the app by adding, modifying, and deleting contacts to ensure data synchronization]. 3. Discuss the importance of user testing and gathering feedback for iterative improvements. 4. Guide participants on how to share their app with others for testing or deployment. **Wrap-up and Discussion (20 minutes)** 1. Facilitate a group discussion on the challenges faced, lessons learned, and the potential applications of app development with Google AppSheet.

		2. Encourage participants to share their app prototypes and demonstrate their functionality. 3. Discuss the importance of collaboration and creativity in app development.
	Design intuitive user interfaces for app navigation and data entry.	**Group Activity: App Concept Brainstorming (60 minutes):** 1. Divide participants into small groups and assign each group a specific app category or problem domain. 2. Instruct each group to brainstorm and come up with an app concept that would benefit users in their assigned category. 3. Encourage creativity and collaboration within the groups while considering intuitive user interfaces. **Hands-on App Building (60 minutes):** 1. Instruct participants to use AppSheet's editor to create their app interfaces based on their app concepts. 2. Guide them through the process of importing or creating spreadsheets with relevant data for their app. 3. Assist participants in defining entities, properties, and relationships to organize their data effectively. 4. Encourage participants to explore various UI options in AppSheet, such as different ways to display data, form views, and customization of style and branding. 5. Emphasize the importance of intuitive navigation and data entry interfaces in their app designs. **Group Presentation and Feedback (30 minutes):** 1. Allow each group to present their app interfaces to the rest of the participants. 2. Encourage feedback and constructive suggestions from both the facilitator and other participants. 3. Discuss the strengths and areas for improvement in each app interface, with a focus on intuitiveness and user-friendliness.

		Reflection and Discussion (15 minutes): 1. Facilitate a group discussion on the challenges and successes encountered during the app building process. 2. Discuss the importance of intuitive user interfaces and how they contribute to a positive user experience. 3. Encourage participants to share their learnings and insights from the activity. **Wrap-up and Next Steps (10 minutes):** Summarize the key takeaways from the activity, emphasizing the importance of intuitive app design and the potential of AppSheet as a tool for creating user-friendly interfaces. Provide additional resources, such as the AppSheet Help Center and community forums, for participants to further explore and enhance their app development skills. *Resources:* ● "Get started with AppSheet - AppSheet Help" ● "App design 101 - AppSheet Help" ● "How to Create an Intuitive Design" by Interaction Design Foundation ● "App design: The Essentials - AppSheet Help" ● "The Intuitive Interface" by Princeton University ● "How to create an app | Google AppSheet" ● "AppSheet: mobile apps from spreadsheets: App templates" ● "How can we help you?" - AppSheet Help Center ● "Make an 'AppSheet-friendly' spreadsheet - AppSheet Help" ● "Users: The Essentials - AppSheet Help"
	Implement logic and automation features to enhance the functionality of the app	**Introduction to Logic and Automation in AppSheet (15 minutes):** 1. Introduce the concept of logic and automation in app development using AppSheet. 2. Explain how logic and automation can enhance app functionality, streamline processes, and improve user experience.

		3. Share the benefits of using AppSheet's automation features, such as saving time, reducing manual tasks, and increasing productivity. **Overview of App Design and Logic (20 minutes):** 1. Review the basics of app design using AppSheet, including defining entities, building spreadsheets, and designing the user experience. 2. Discuss how logic is implemented in AppSheet using expressions, similar to spreadsheet formulas, to define dynamic behavior and calculations. 3. Explain the concept of virtual columns and tables, which are computed using expressions to provide additional functionality to the app. **Group Activity: App Functionality Brainstorming (30 minutes):** 1. Divide participants into small groups and assign each group a specific app category or problem domain. 2. Instruct each group to brainstorm and come up with ideas to enhance the functionality of their apps using logic and automation. 3. Encourage creativity and collaboration within the groups while considering the needs and preferences of their target app users. **Hands-on App Building with Logic (60 minutes):** 1. Instruct participants to use AppSheet's editor to implement logic and automation features in their apps based on their brainstormed ideas. 2. Guide them through the process of using expressions to define dynamic behavior, calculations, and conditional formatting. 3. Assist participants in creating virtual columns and tables to add additional functionality and automate processes within their apps. 4. Encourage participants to explore AppSheet's automation components such as bots, events, processes, tasks, and actions to streamline app workflows. **Group Presentation and Feedback (20 minutes):**

		1. Allow each group to present the enhanced functionality of their apps to the rest of the participants. 2. Encourage feedback and constructive suggestions from both the facilitator and other participants. 3. Discuss the effectiveness of the implemented logic and automation features in enhancing the functionality and user experience of the apps. **Reflection and Discussion (15 minutes):** 1. Facilitate a group discussion on the challenges and successes encountered during the implementation of logic and automation features. 2. Discuss the impact of logic and automation on app functionality, user experience, and productivity. 3. Encourage participants to share their learnings and insights from the activity. **Wrap-up and Next Steps (5 minutes):** 1. Summarize the key takeaways from the activity, emphasizing the importance of logic and automation in enhancing app functionality. 2. Provide additional resources, such as the AppSheet Help Center and community forums, for participants to further explore and enhance their app development skills. *Resources:* ● "AppSheet automation: The Essentials - AppSheet Help" ● "AppSheet automation: The Components - AppSheet Help" ● "AppSheet Automation | Google Cloud" ● "App design 101 - AppSheet Help" ● "Automation bots with AppSheet and no-code" ● "Bots: The Essentials - AppSheet Help ● "Example automations - AppSheet Help" ● "Automation features - Module 2: AppSheet Automation | Coursera" ● "AppSheet : mobile apps from spreadsheets : Template: Other for the Technology industry"

	Customize the app's branding, appearance, and behavior.	