# **FunFruitFacts Game**

@ screen-20241103-211035.mp4

**Designers:** 

Dimira & Joyce

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## **Plan & Design Your Solution: SCRUM**

## Product Backlog / User Story

What big picture product features need to be completed in order to have a successful product. Note, in this section you might need to include sketches to better aid in a strangers understanding of the goal of this product.

The gaol of our game was to provide fun facts about a few different fruits while the player "picks" strawberries, watermelons, and bananas off a bush.

## Sprint Planning & Sprint Backlog

What are all the smaller tasks that need to be completed in order to complete your project, and how long do you think each task will take to complete (breakdown using hours or minutes, also use strikethrough text styling once a task has been completed...if it took more time add a **+\_\_\_units** and if it took less time add **-\_\_\_units** you must use the highlight color).

Note: Make sure you add all the task required for the entire project in the table below. Insert rows as needed in the table below.

Table 1: Main Table: Contain all the tasks

Tasks	Estimated Time	+/- Time	Completed By Date and Person name	Sprint #
Blueprint	15 min	-5 min	10/22: Joyce	1
Sharing code	5 min	+10 min	10/24: Dimira	1
Coding	A lot of time?	N/A	N/A	N/A
Designing	1 hr	N/A	N/A	N/A
MOVED TO MIT APP INVENTOR	N/A	N/A	N/A	N/A

Basic Layout+code+transfer images over	1 hr	+15 mib	10/31: Dimira	2
Advancing code	20 min	+10 min	10/31: Joyce	3
Designing; making the game more visually appealing(custom buttons, recoloring every screen, new text, etc_)	30 min	+15 min	11/2: Joyce	3

## Sprint 1

#### Sprint 1 Tasks

Copy and paste tasks, with time details from the sprint backlog and place them here. Note: This will include the task you plan to complete in the first week from the above table. Insert rows as needed in the table below.

Tasks	Estimated Time	+/- Time	Completed By
AI generate and find images Remove backgrounds Input images: bush, fruits, etc Change background color Position bush Make sure images work Research facts	30 min 15 min 7 min 2 min 5 min 20 min 10 min	+10 min -5 min +3 min N/A -10 min -5 min -5 min	JZ & DS Joyce Dimira Joyce JZ & DS JZ & DS Joyce

#### Sprint Retrospective (Individual): Dimira

What challenges as a team did you face that are NOT code related? Were you able to overcome those challenges? What is one goal you have to work better as a team (that is not code related)? We didn't know where to start or what our game would be about. We decided to start off by using HTML to make a simple game which included a bush and fruits. Each time a fruit is clicked on a fact about it would appear on the screen.

#### Sprint Review (Individual): Dimira

What challenges as a team did you face that are code related? Were you able to overcome those challenges? Do we need to make any modifications to our sprint backlog (add more tasks, put back tasks we did not finish, edit original tasks based on feedback, etc.)?

We started off by using CSS code to help us figure out how to go on with the code. We struggled a lot in figuring out how to position the bush and the fruits on top of it. We decided to go to Mr.Baez for help which then solved a lot of our problems.

#### Sprint Retrospective (Individual): Joyce

What challenges as a team did you face that are NOT code related? Were you able to overcome those challenges? What is one goal you have to work better as a team (that is not code related)?

We struggled to come up with a general idea that not only was interactive but contributed to the community in a cute and fun way. We also struggled to stay on task the entire time during block day however I'm sure we can improve.

Sprint Review (Individual): Joyce

What challenges as a team did you face that are code related? Were you able to overcome those challenges? Do we need to make any modifications to our sprint backlog (add more tasks, put back tasks we did not finish, edit original tasks based on feedback, etc.)?

We spent more time than needed trying to live to share the code, ai generate images, and input images that would show up on all devices which w were able to complete with the tips from Mr. Baez. A lot of time was also put into positioning our bush, which we did eventually position correctly with the help of Mr. Baez and Copilot.

Move onto the next sprint and repeat the previous steps to develop and test each feature until you have completed your project.

## Sprint 2

Sprint 2 Tasks

Copy and paste tasks, with time details from the sprint backlog and place them here. Note: This will include the task you plan to complete in the first week from the above table. Insert rows as needed in the table below

Tasks	Estimated Time	+/- Time	Completed By
Add music Trashing html code SWITCH TO MIT APP INVENTOR	10 min	-5 min	Joyce
Transfer images over Block out basic code  • Make fruits buttons:make something pop up  • Input nutrition facts  • Position fruits and bush	10 min 1 hr	+5 min +10 min	Dimira Dimira

Sprint Retrospective (Individual):Dimira

What challenges as a team did you face that are NOT code related? Were you able to overcome those challenges? What is one goal you have to work better as a team (that is not code related)? Some challenges we faced were finding the right images to use for our design view. We wanted animated fruits which weren't working out at first until we tried different AI websites. Yes, we decided

to go look at multiple different sites to come up with new fruits and worked together to figure out what to write.

Sprint Review (Individual):Dimira

What challenges as a team did you face that are code related? Were you able to overcome those challenges? Do we need to make any modifications to our sprint backlog (add more tasks, put back tasks we did not finish, edit original tasks based on feedback, etc.)?

We realized that doing HTML was not working out for us and was not as efficient as to if we were using block code in MIT. This led us to switch our project to a new platform to finish on time with better results.

Sprint Retrospective (Individual): Joyce

What challenges as a team did you face that are NOT code related? Were you able to overcome those challenges? What is one goal you have to work better as a team (that is not code related)?

We struggled to realize that we were too design-oriented. With the help of Mr. Baez, we realized we were NOT going to be able to complete our project in time if we continued to struggle with HTML, causing us to switch over to MIT app inventor.

Sprint Review (Individual): Joyce

What challenges as a team did you face that are code related? Were you able to overcome those challenges? Do we need to make any modifications to our sprint backlog (add more tasks, put back tasks we did not finish, edit original tasks based on feedback, etc.)?

We asked Google, co-pilot, chatGPT, and Mr. Baez yet we still couldn't figure out how to write the right code to overlap our fruit images over the bush image. We also couldn't even position our fruits correctly on top of that. As for the Sprints, we decided to just move over to MIT app inventor and restart.

Move onto the next sprint and repeat the previous steps to develop and test each feature until you have completed your project.

### Sprint 3

#### Sprint 3 Tasks

Copy and paste tasks, with time details from the sprint backlog and place them here. Note: This will include the task you plan to complete in the first week from the above table.

Insert rows as needed in the table below

Tasks	Estimated Time	+/- Time	Completed By
Set up the basic layout Finding+inputting music Draw out custom buttons	15 min 5 min	-10 min N/A N/A	Dimira Dimira
Recoloring and formatting Extra coding+final touches in code and design Complete doc	15 min 30 min 10 min 15 min	-5 min N/A N/A	Joyce Joyce Joyce DS & JZ

#### Sprint Retrospective (Individual): Dimira

What challenges as a team did you face that are NOT code related? Were you able to overcome those challenges? What is one goal you have to work better as a team (that is not code related)? After changing our project and adding it to MIT app inventor the sprites started to glitch out a bit. But all we had to do was change the coordinates to match the place we wanted it to be in the game. One goal we need to work better on is making sure we have everything ready to use before going ahead.

#### Sprint Review (Individual):Dimira

What challenges as a team did you face that are code related? Were you able to overcome those challenges? Do we need to make any modifications to our sprint backlog (add more tasks, put back tasks we did not finish, edit original tasks based on feedback, etc.)?

There weren't any code related problems while working on the game. We found working on MIT instead of using HTML to be much easier.

### Sprint Retrospective (Individual): Joyce

What challenges as a team did you face that are NOT code related? Were you able to overcome those challenges? What is one goal you have to work better as a team (that is not code related)?

After moving to MIT app inventor, progress was made fast and there weren't any big problems we faced. However, me and Dimira did have a dispute over the design view of the game but overall small challenges were quickly overcome.

Sprint Review (Individual): Joyce

What challenges as a team did you face that are code related? Were you able to overcome those challenges? Do we need to make any modifications to our sprint backlog (add more tasks, put back tasks we did not finish, edit original tasks based on feedback, etc.)?

We did have a few small challenges on the way of MIT app inventor, but it was solved quickly. Coding with MIT was a LOT easier than HTML and no extra sprints or steps necessarily had to be added,

Note: Add more sprints if needed until you complete the project, or the project is due!

### Final Sprint Review & Retrospective (Individual): Dimira

Starting off, we wanted to use HTML to play out our idea of the fruit fact game. However, we faced multiple challenges in making everything go according to plan, this led to not enough time to finish the game. Some struggles we faced included, the positioning of the bush, the places the fruits would go and the overlapping of our images. Due to this reason, we immediately switched to MIT app inventor to start using block code. Things there went much smoother than they did while using HTML. We put our images in and started to code as per our plan previously. However, since we only had one period to switch everything up we struggled in getting our app to reach its potential. Next time, we should start with something we know really well like block coding and the basics instead of going for the higher levels.

## Final Sprint Review & Retrospective (Individual): Joyce

When we started, we really wanted to code this game through HTML, however, we faced countless obstacles with it including struggling to live share the code, position things properly, overlay images, input constant playing music, and so much more. Though progress was slow the overall product we were getting was alright--but it wasn't enough at all. It was like a rollercoaster working with HTML, constantly calling Mr. Baez over until the last school day to work on it we decided to start completely from scratch and moved to MIT app inventor with encouragement from Mr. Baez. Looking back we should have restarted a while back when we realized how problematic coding on HTML was but were stubborn, we also learned we were WAY too design-focused. Thankfully coding on MIT was a breeze, though it's not the product I had hoped to reach with the limited time, I'm still content with it. Next time I'll know to be more conscious of the functionality rather than the design and try to be more flexible.

## **Final Product & Justifications**

Insert a Video of your final app in action here



Final .aia file link:

https://drive.google.com/file/d/1yVbiD-Tg4Z50YMFbqXYMBfhYc6yZawdo/view?usp=sharing

## **Self Evaluation & Final Project Code**

## Interpretive Performance Guide

To help prepare you for the next Computer Science Course (AP CSP) I want you to look at and evaluate what score you would get based on the following <u>Interpretive Performance Guide (Click Here)</u>. Note: if you do not satisfy and show proof in this documentation of all items in the Low category give yourself a "o" for that row.

Based on the Guide My partner and I would get: **Medium High** 

Justification for that score, go into detail on what rows you think you would get and why!

## **Program Code**

Insert as many screen captures as needed of your program code with readable comments for the major features and functional aspects of your App (Note: I suggest you use a table to help organize your images and comments (comments can use app inventor comments or text in this document)):

Image	Comments
	Starting Screen: Press on any fruit and a rustle sound will play, proceeding to send you to another screen of a fun fact from the fruit you picked. The background music also plays

Bananas contain the neurotransmitters, dopamine and serotonin that can lift the mood	If you clicked a banana, this is one of the screens that could pop up. It shows a fun fact and a custom back button that'll play a fun sound when clicked.
Bananas are technically berries	By clicking a different banana, a different fact will pop up.
Strawberries contain antioxidants that can protect you from health conditions such as heart disease, cancer, diabetes, and more	If you clicked a strawberry, this is one of the screens that could pop up. It shows a fun fact and a custom back button that'll play a fun sound when clicked.
Strawberries actually provide more Vitamin C than oranges	By clicking a different strawberry, a different fact will pop up.
Strawberries are the only fruit that has it's seeds on the outside	And by clicking a different strawberry, a different fact will pop up.

92% of a watermelon is just water!	If you clicked a watermelon, this is one of the screens that could pop up. It shows a fun fact and a custom back button that'll play a fun sound when clicked.
Watermelon can be classified as a fruit and vegetable	By clicking a different watermelon, a different fact will pop up.

## Conclusion

#### **Conclusion Questions:**

- 1. What is the purpose of your program?
- 2. Where does the program integrate mathematical and/or logical concepts?
- 3. What does one of the algorithms do in the program?

#### Dimira's Reflection:

The purpose of our program is to educate people about the facts about fruit and mainly just for fun. Our program uses logical concepts since we are just adding facts about fruits how how they can help our environment. One of the algorithms in our program leads to whenever we click on a fruit a new page opens up showing us the facts about it.

## Joyce's Reflection:

Our program helps people learn the facts about different fruits. It uses logic since it shows how fruits are and helps educate people(mostly younger kids) about them. One of the algorithms in our program controls where the fruits and the bush go in the game. This helps decide the positions of the sprites whenever we open the app.

# **Project Log & Brainstorming**

This table MUST be detailed! It will be how I grade a minimum of 10% of your score for this project. You must record an entry for every day of this project, even if we do not meet for class.

### **Brainstorming:**

Steps:

- 1. Plan the basic app characteristics
- 2. Make a "BluePrint"
- 3. Begin setting the layout of the project slowly
- 4. Add the important factors to the design view
- 5. Start adding the coding/programming
- 6. Start testing the app for any errors
- 7. Add any additional details.

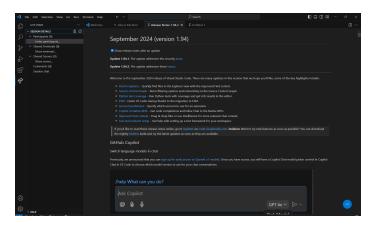
You should also include brainstorming & developmental sketches here. They can be google drawings, photos of your hand sketches, etc. *No matter what though, Organize and Format Nicely!!!* 

Reminder, your App must meet ALL requirements given in 1.1.6 PLTW instructions

#### Partner 1: Dimira

Partner 2: Joyce

I shared the html file from Visual Studio Code and added Joyce to it. We both then brainstormed ideas and steps for the project. We also started making the layout for the app. Dimira shared the VS code with me. We brainstormed ideas for our app(with Mr. Baez's insight) and formed a basic plan with steps. Now, we were working on our blueprint, but class was cut short.



We worked more on how we would set up the layout of the app and looked at the blueprint to do so.

I finished up the blueprint and then we went over how to set up the design view of the app, before we started the code.



We found a way to do the code side by side and have generated all the images. All of the prep for the project is done like the images and background. Everything that will go into the design of the project is over with. I received the shared code from Dimira and we began teaching ourselves new concepts to input into the code. We managed to gather more images for our app and tweaked our plan a little.





```
<html>
<body style="background-color: hsl(202, 100%, 93%);">
<img src="c:\Users\DimiraSh\Downloads\bush.png" width="50%" height="50%" >
</body>
</html>
```

I worked on adding the images and their proportions and pushing the bush downwards. Joyce and I discussed the plan for Monday and overlapping the images.

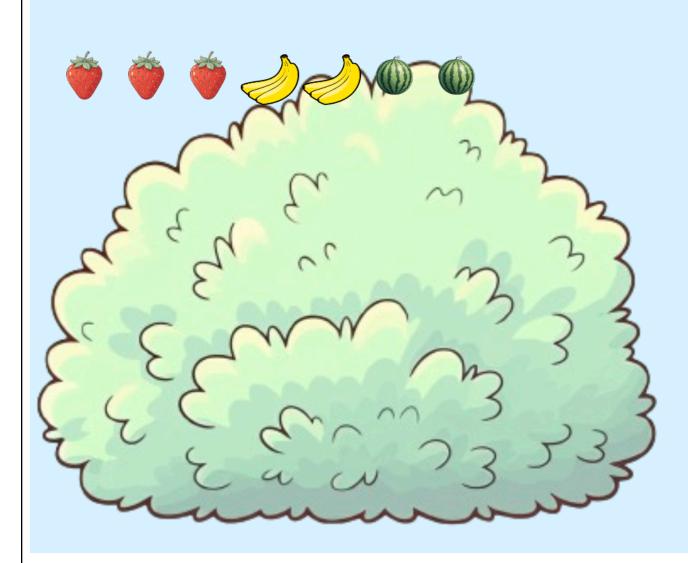
I worked on removing backgrounds and sending more images to Dimira. I also through trial and error, found an effective way to center our bush after much struggle between both me & Dimira

Today we worked on learning how to over lap images and make them come from the source instead of my computer. To do this we added the images into the file of 116 project. We used Today me and Dimira spent most of the day learning how to make sure our images wok on every device and overlap our fruits from Mr. Baez. We also learned we're able to use Co-Pilot

for assistance.

```
<meta charset="UTF-8">
            .bush {
                position: relative;
                z-index: 1;
            .fruit {
                position: absolute;
                z-index: 2;
                top: 200px;
               left: 150px;
Shody style="background-color: hsl(202, 100%, 93%);">
<div class="bush">
   <img src="bush (1).png" width="65%" height="65%" style="z-index: 1 ;"</pre>
style="position: relative;">
    <div class="fruit">
    <img src="1729617647839-removebg-preview (1).png" style="top:50px; left:50px;"</pre>
width="5%" height="5%" alt="strawberry">
    <img src="1729617647839-removebg-preview (1).png" width="5%" height="5%"</pre>
alt="strawberry">
    <img src="1729617647839-removebg-preview (1).png" width="5%" height="5%"</pre>
alt="strawberry">
   <img src="banana-25339 1280.png" width="5%" height="5%" alt="banana">
    <img src="banana-25339 1280.png" width="5%" height="5%" alt="banana">
    <img src="image fx -removebg-preview.png" width="5%" height="5%"</pre>
alt="watermelon">
    <img src="image fx -removebg-preview.png" width="5%" height="5%"</pre>
```

```
alt="watermelon">
</div>
</div>
</body>
</html>
```



Today we worked on the music and tried to position the fruits on top of the bush. We were not able to get the code right for either of them. We began searching for facts to put for each of the fruits.

Dimira and I tried downloading and adding code for the background music into our app. I also began to research nutrition facts/fun facts on our fruits

```
<title>Fruit on Bush</title>
            .bush {
                position: relative;
                z-index: 1;
            .fruit {
                position: absolute;
                z-index: 2;
               top: 200px;
               left: 150px;
Cbody style="background-color: hsl(202, 100%, 93%);">
   <img src="bush (1).png" width="65%" height="65%" style="z-index: 1 ;"</pre>
style="position: relative;">
   <div class="fruit">
   <img src="1729617647839-removebg-preview (1).png" style="top:50px; left:50px;"</pre>
width="5%" height="5%" alt="strawberry">
   <img src="1729617647839-removebg-preview (1).png" width="5%" height="5%"</pre>
alt="strawberry">
    <img src="1729617647839-removebg-preview (1).png" width="5%" height="5%"</pre>
alt="strawberry">
   <img src="banana-25339_1280.png" width="5%" height="5%" alt="banana">
    <img src="banana-25339 1280.png" width="5%" height="5%" alt="banana">
   <imq src="image fx -removebg-preview.png" width="5%" height="5%"</pre>
alt="watermelon">
    <img src="image fx -removebg-preview.png" width="5%" height="5%"</pre>
alt="watermelon">
 <source src="bg.mp3"type="audio/mpeg">
```

#### </html>

We restarted the whole project on MIT app inventor instead. I added the fruit buttons and screens while Joyce did the facts for each of them. We had decided to move over to MIT app inventor realizing progress was way too slow. Dimira worked on the basic code, and layout, and transferred the old images over. After her turn was over, I worked on the design: customizing back/redo buttons, recoloring, redoing text, etc, and advancing the basic code to be more functional.

