

Group 28 Assignment

Stage #2

e-Drink Maker Project Requirements

Connor Cozens, Shawn Moffatt, Ben MacGillivray, Justin
Marshall , Jodi Boone

User Stories

Required

1. A User Interface to select desired drinks.

User Story

As a user, I will receive a visual menu where I can select whether I want to select a drink from the menu, or play a pre-programmed game.

Acceptance Tests

User selects menu, menu should open and show what drinks it can make. (pass)
User selects games, menu should open showing what games are available. (pass)
User selects an option and nothing opens (fail)

Story Points

2 Points

2. System to pour drinks into a cup provided by the user.

User Story

As a user, once I select a drink the machine will find and select corresponding drink, and pass requirements to make the drink to the peripheral system.

Acceptance Tests

User selects a drink, and drink is made correctly. (pass)
User selects a drink, and drink is made incorrectly. (fail)

Story Points

4 Points

3. A container to house all machine peripherals

User Story

As a user, the machine is aesthetically pleasing and prevents mix of liquids and hardware preventing malfunction.

Acceptance Tests

Liquids don't mix with electronics. (pass)
Liquids spill inside the machine. (fail)

Story Points

1 Point

4. Raspberry Pi to control all required peripherals (pumps, motors, UI, etc.)

User Story

As a user, the Raspberry Pi should interact with all required motors and related peripherals without additional user input in the process of creating a drink.

Acceptance Tests

User only needs to press a drink and drink is made (pass)

User needs to manually turn on a motor (fail)

Story Points

5 Points

Optional

1. Cleaning function to wash out the system after each mixed drink & Send water through pipes to flush out previous fluid

User Story

As a user, I can request a cleaning function to wash out any remaining liquid in the liquid distribution system.

Acceptance Tests

- User can select the cleaning option on the user control panel. (pass)
- User can observe that water is being run through and coming out of the distribution device (pass)
- Liquid other than water comes through the pipes (fail)

Story Points

1

2. LED lights to signal drink being made

User Story

As a light notification system, I can show users when the machine is waiting, being used, and ready so users can have visual indicators.

Acceptance Tests

Light shows yellow when machine is idle (pass)

Light shows red when machine in use (pass)

Light shows green when machine finishes making a drink (pass)

Story Points

3 Points

3. Pre Programmed Games

A. 'Shoot your Shot'

User Story

As a user, I can access the games feature and select the game "roulette" which will pour a random selection of drink ingredients.

Acceptance Tests

- User can select the game feature through the interactive control panel and observe confirmation message that "roulette" has been selected and that the drink is in progress. (pass)
- User can observe that the drink has been poured (pass)
- User can consume the beverage and tell if the e-Drink maker poured a good, or bad drink (pass)

Story Points

2

B. 'YOLO'

User Story

As a user, I can access the games features and select the game "YOLO" which will pour a random selection from the menu of premade drinks for an exciting and surprising experience!

Acceptance Tests

- User can select the game feature through the interactive control panel and observe confirmation message that drink is in progress (pass)
- User can observe that drink has been poured and receives a beverage (pass)

Story Points

2

5. Select the amount of liquid to pour for the drink. (I.E. Single Shot, Double Shot)

User Story

As a user, I can request that for a given drink mix that the machine will distribute a different ratio of or the composite ingredients

Acceptance Tests

- After selecting a drink option the user is prompted to enter their liquid ratios (pass)
- The machine will distribute that given ratio of liquid (pass)
- The machine will still distribute the same volume of liquid that it would normally (pass)

Story Points

7

Wish-List

1. Allow users to create and save their own drink recipes

User Story

As a user, I can input the recipe for a drink into the e-Drink Maker so that it will save it and be able to create it for me like the pre-programmed drinks.

Acceptance Tests

- User can create and delete saved drinks stored on the machine. (pass)
- User can access a list of ingredients stored within the machine while creating a recipe. (pass)
- User can modify the names of stored ingredients on the machine if the liquids stored inside are changed to something else. (pass)
- After a drink is added, it is not saved into the list of drinks (fail)

Story Points

5

2. Google Assistance integration

User Story

As a user, I can give vocal commands to the e-Drink Maker so that it will perform actions without physical input.

Acceptance Tests

- Various voice activated commands such as:
 - User can select any drink from the list and have the machine make it for them. (pass)
 - User can activate the cleaning function to flush out the system with clean water. (pass)
 - User can select one of the pre-programmed games to run. (pass)
- Confirm that voice notifications are given after various activities are completed. (pass)
- Confirm that Spotify integration is supported by playing music through the system. (pass)
- Confirm that phone notifies the user for low liquid storage. (pass)
- Commands are given but no commands take place (fail)

Story Points

3. Touch Screen interface

User Story

As a user, I can access all of the functions of the e-Drink maker through a touch screen interface. Through this interface I can navigate, access, and utilize all the capabilities programmed into the system.

Acceptance Tests

- User tactilely observes and confirms the responsiveness of the touch screen (ie. minimal latency in touch to action). (pass)
- User can confirm that the features accessed through this interface correspond to the desired function. (pass)
- User can navigate and understand the layout intuitively. (pass)
- User touches the screen but input is not registered. (fail)

Story Points

8

4. Pressure sensor peripheral so that the drinks only pour when a glass is present to prevent spills

User Story

As a user, when I try to select a drink, the machine will only continue if I have placed a glass in the pouring area; otherwise, I will receive a message on the display instructing me to.

Acceptance Tests

- Confirm that nothing will be poured if a glass is not present. (pass)
- Confirm that the machine will function properly if a glass is present. (pass)
- Confirm that a message displays to the user when a glass is not present. (pass)
- A drink pours when there is no cup on the system (fail)

Story Points

3

UML

