SE Sprint 5 Report

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Introduction

In the 5th and final sprint of the project we finally reached the end of the game. The game is Called Pencil Producer and it is a simple, user friendly simulation game where you, the user have the role of a company manager and your goal is to produce 25,000 pencils and increase your budget in order to be considered a winner.

UI

The UI of the game is simple. It consists of one window separated into 4 pages. All the pages will be explained briefly below. Before that we will introduce you to the Resource Files under the name imagesss.qrc which include images, logos and GIF Animations to make the game more User Friendly and simple.
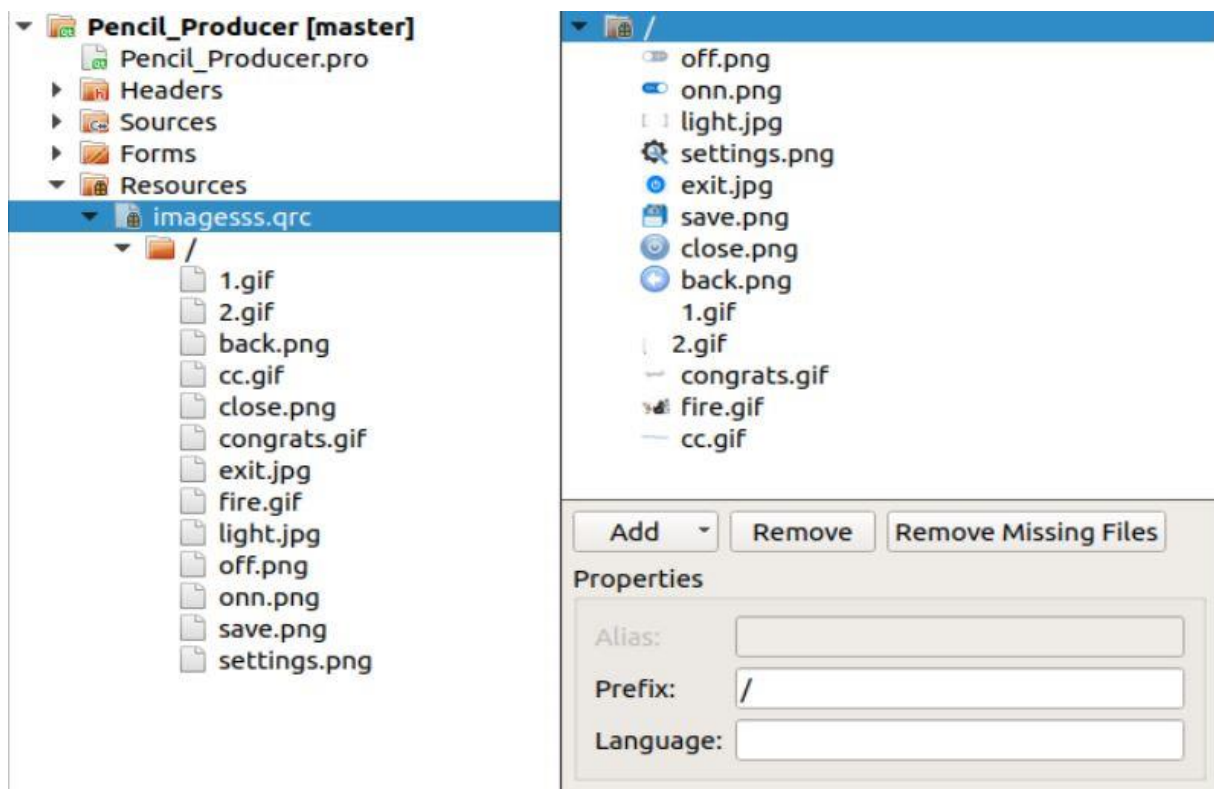

Fig 1. All the Images and GIFs use in the program under the imagesss.qrc file

1. Page One (GAME INTRODUCTION)

Before that, we start with the background. The background image of the window is called light.jpg.

Fig 2. Light.jpg image as background

Now let's get to the the first page, named the GAME INTRODUCTION. In this page we introduce the user to the game. The user has two options: to START a new game or to LOAD a saved game. The page also includes the GIF named 2.gif.
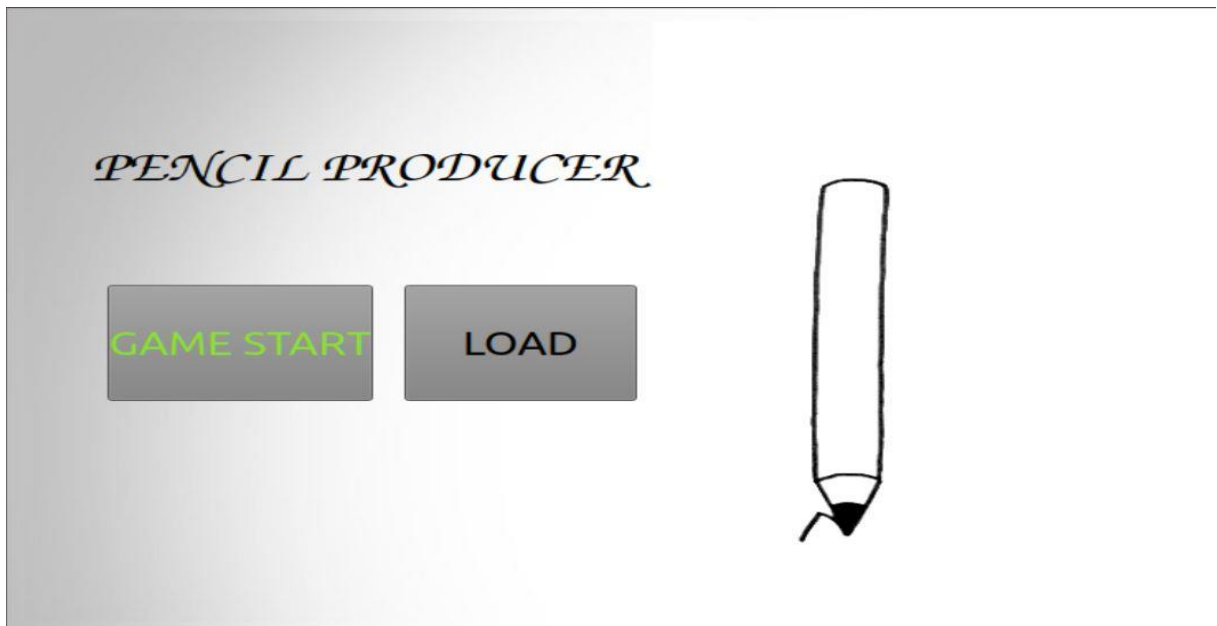

Fig 3. Game introduction page

2. Page 2 (MAIN WINDOW)

The second and most important page consists of all the functions of the game. Here the user has officially started the game. He/She is given default resources such as Wood and Graphite and also a budget of 450.0$ to start producing. This window includes all the functions of the game given in the Sprints 2-4:

Sprint 2

o Pencil production

▪ Inventory

▪ Make pencil button

▪ Total number of pencils produced

o Wallet system

▪ Bank balance

o Supply-demand based sales

▪ Price of pencil

▪ Increase price of pencil by $0.05.

▪ Decrease price of pencil by $0.05

▪ Public demand

▪ Pencil sale

▪ Crediting pencil sale revenue to your bank balance

o Production material

▪ Wood inventory

▪ Graphite inventory

▪ Buy wood (adds 100.00m of wood)

▪ Buy graphite (adds 100.00m of graphite)

▪ Price of wood

▪ Price of graphite

o Automatic Pencil Machin

▪ Buy more of APM 2000

▪ APM 2000 inventory

▪ Price of APM 2000

• Sprint 3

o Save and load

o Intelligence currency

o Upgrading the APM 2000

o Marketing

o Debugging tool

• Sprint 4

o High score board works

   • POST score

   • GET score

   • Score board display

*Note: The Score board display is in the Settings Page which will be introduced below.
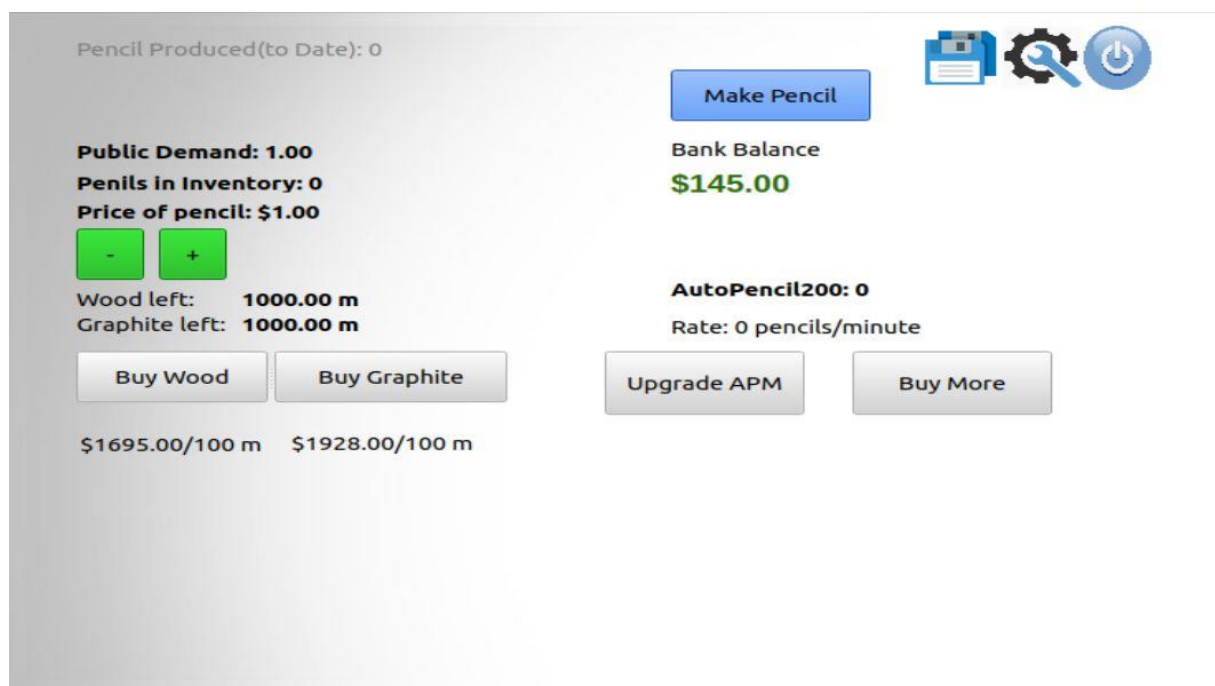

Fig 4. Main Window page

In figure 4 we notice that the Debugger Button is not there. We decided to include it in the Settings Button, because that is an important Setting Tool and it is mostly used by the user as a "cheat" button to win the game. So the user doesn't have to worry about losing the game. The Debugger Button is always there for the user!

Speaking of the Settings Button. We added three very user friendly buttons which are the Save Button, the Settings Button and the Exit Button.

Fig 5. the Save Button, the Settings Button and the Exit Button

3. Page 3 (SETTINGS WINDOW)

This Page is very important for the user. We decided to add The Scoreboard in this Page so the player can see his/her highest score. It also includes the famous Debugger Button in the style of an ON/OFF button. For that we used two images named onn.png and off.png and the StyleSheet below:
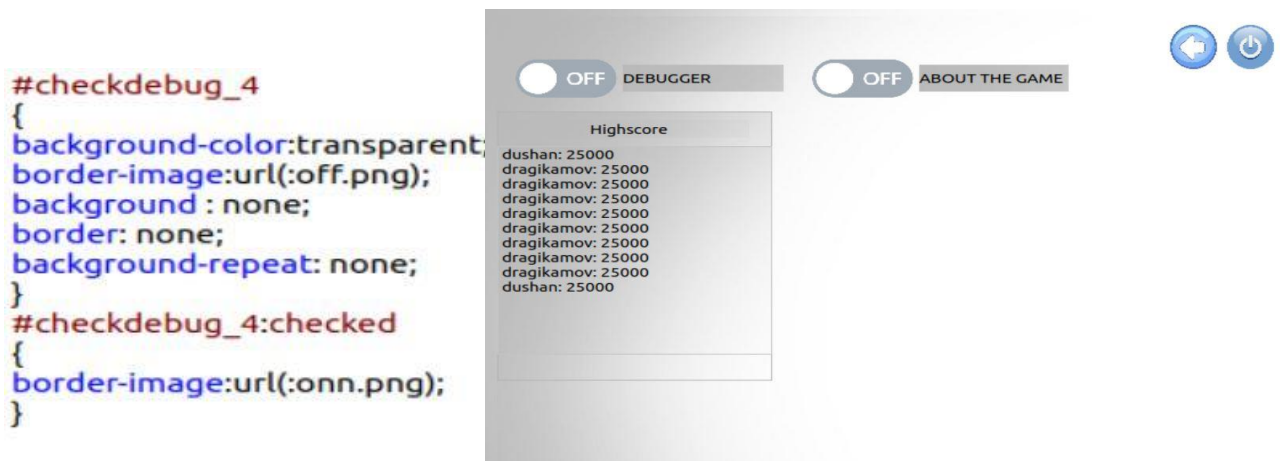

Fig 6. The stylesheet of the button and The Settings Window

This window also includes two buttons which is the Back Button and The Exit Button. The Back Button takes the user back to the Main Window. By clicking the ON/OFF Buttons we add:

- The Debugger Tools which help the user win the game
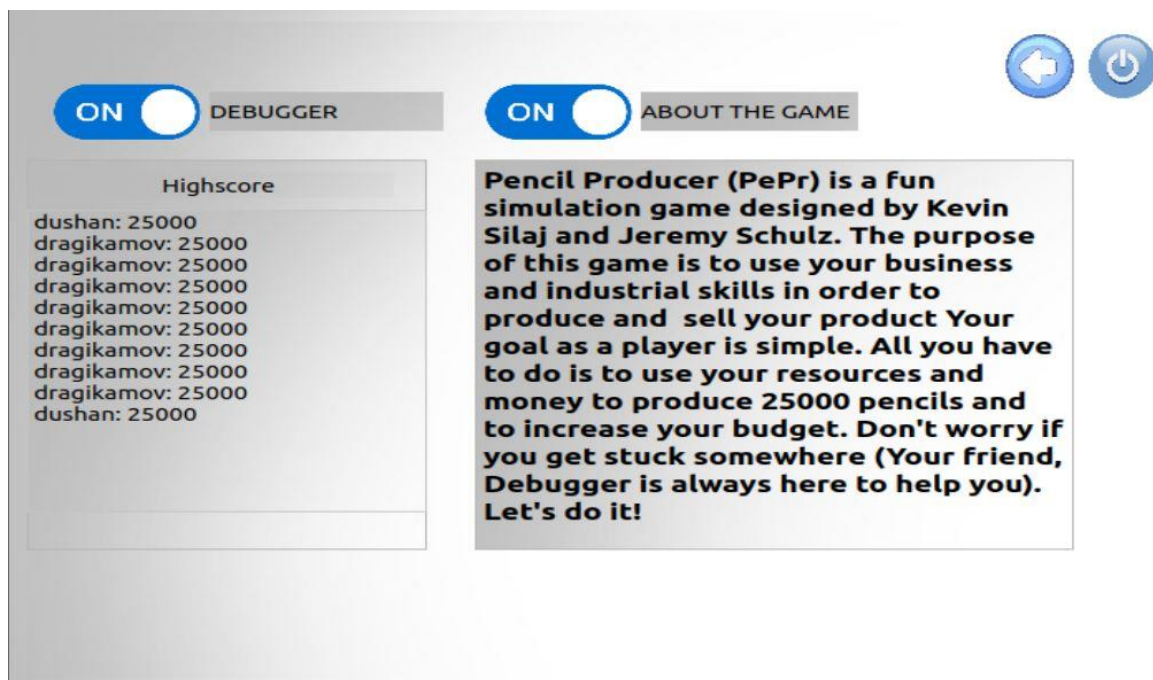- The About the game Page which gives a short description of the game to the user.

Fig 7. The Debugger Button and the About the Game Button are turned one

The buttons are now turned ON. If we click back and go to the Main Window, we see that the Debugger Tool Buttons are shown below.
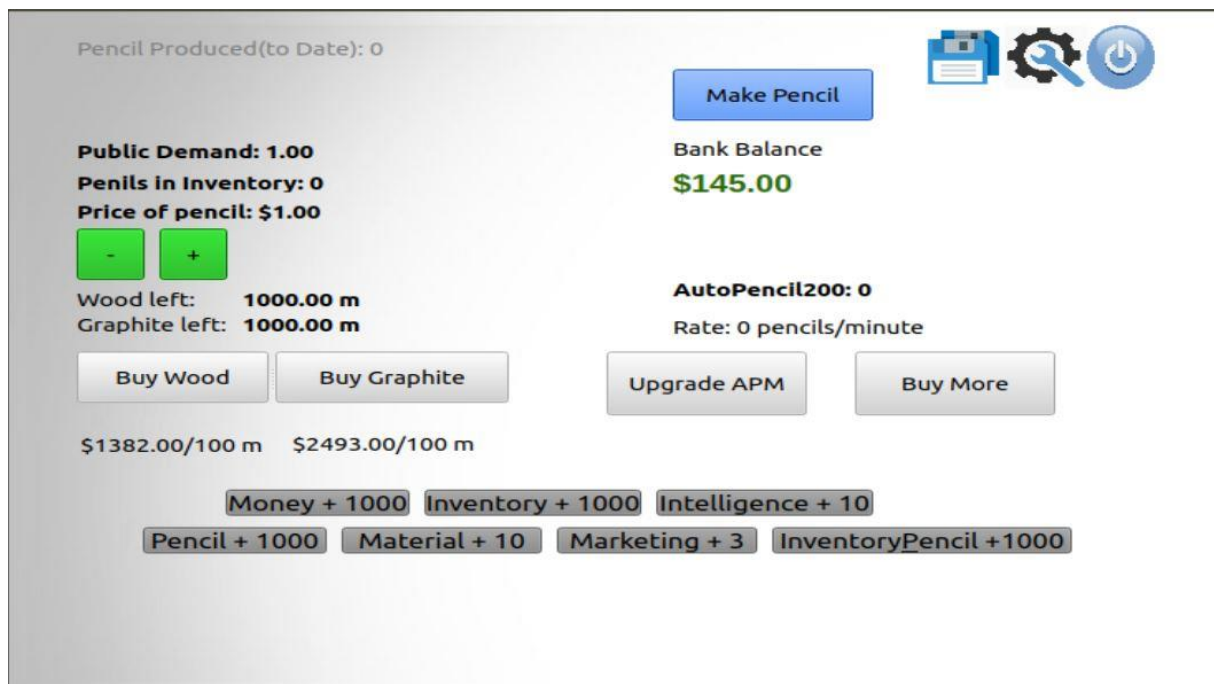

Fig 8. The Main Window with the Debugger Tool Buttons

4. Page 4 (GAME OVER)

CONGRATULATIONS! You have won the game!

After reaching 25,000 pencils produced, the user reaches the End (a rewarding GIF named congrats.gif . The user can simply choose to continue to play or to end the game.

Fig 9. GAME OVER Window

Conclusion

This Game is the first project for our Software Engineering class and it taught us a lot about Qt, Testing, Documentation and basically, everything we need to know to make a good program. As future programmers and software developers, this project showed us how clean and good a code should be to satisfy the user. GAME OVER!

Resources

- Sprint 5 Wrap-Up, retrieved from Matius Sulung Chairani (May 2019)