Group 19

Return A;

Matthew Niemiec, Justin Rowsell, Sean Mcclure, Nicholas Smith, Jacob Berman, Conor McNamara

CSCI 3308 Final Report

Intro

Throughout the project everyone on our team has learned a great deal about software methodology and practices. We made a python game running on pygame for that would have a front end website communicating with backend database information to display stats about the game on our website. Our idea came from all of us loving video games, but also a passion about what is wrong with video games today. We overall were successful in implementing are project and all of its features however, there is definitely room for improvement in making the whole experience of the game more user friendly and enjoyable.

Results of Use of Software Methods

For our project, we used various software methods. We used Agile with 2 week life cycles, Trello, Github, and Groupme. The Agile method worked extremely well. We were able to set goals for our teams to accomplish every two weeks and we were able to discuss those goals with ease and make adjustments as necessary. Trello was not as successful. This was because we outlined our goals very well during our team meetings and our teams were very small, so it was easy to communicate within our teams to divide up labor. Github worked very well for sharing files. There were a couple accidental pushes which caused a few errors, but they were very minor and were fixed easily. Finally, Groupme was a success as we were effectively and efficiently able to communicate both as a group and directly to one person.

Status of the Project

We were able to develop a fully functional python game and link it to an online scoreboard for competition. We made unique artwork and music and made our own gameplay. Our menu and options like difficulty and muting the music makes our game

much more attractive to potential users. Some powerups are implemented, with the potential to add more.

The project definitely needs further improvement. The mechanics are still very bug prone, connecting to the website takes more effort than the average user to be willing to put in, and the graphics could just be better. Our game in its current state is at best functional. When all goes well the game is simple and easy but potential bugs could turn off users instantly. A consistent art theme would also help with user retention. Our game could keep its simplistic design but it still needs to look more professional.

List of Accomplishments

-Complete game developed in Python.
    -Custom sprites and backgrounds.
    -Fun and unique play-style.
    -Addicting and fast gameplay.
    -Auto-Updating user high-score leaderboard.
    -Account creation and login to track stats.
-Fully functioning website.
    -Account creation and login.
    -Leaderboard of top users high-scores.
    -List of your high-scores after login.

Outstanding Issues

Right now the project is not perfect as it is. The database requires some work to connect to. In order to connect to the database from the game, you have to go into the web hosting panel and manually add your IP address. The web site doesn't connect to the database at all currently, and requires workarounds in order to display scores.

The game itself also has some issues. For one, there is no confirmation for signing up and logging in correctly, and no error message if your login wasn't successful. Currently the only safeguard that will give you an error is if your passwords are different when signing up for an account

Inside the game, the collision detection needs enhancement. Because the character is a PNG on a transparent background, in order to detect collision, we just checked for overlap between the two images, but this leads to problems since the corners of the image are transparent, which can give the appearance of dying without a collision with the meteor.

There is also a bug where if you're approaching a wall and try to turn around as you're hitting the wall, the Mr. Runner will get stuck inside of the wall. From there you can choose to go deeper into the wall and disappear for an infinite score or come back out and play the game fairly.

The powerups are also a recent development, so they need some work. For one, the user has no idea which buttons to press to use their power ups. This is the biggest issue with them. Another issue is that there is no real-time update on how many power ups the user has collected, which will be fairly easy to implement.

Plan to Reach Goals

Our plan to correct our outstanding issues will be divided into three areas of concentration: database functionality cleanup, bug fixes in the game, and development of future features to add to the game. The first two will be addressed first as they are crucial to retaining any users we will gain in the coming weeks.

Database functionality cleanup will be centered around the login functionality to the database. Currently, a user's IP address must be used to create an account. We are aiming to allow users to create an account with a unique user id and a password of their choosing. Our database development team will tackle this task while practicing pair programming.

Bug fixes in the game will be delegated to the game development team. They are most familiar with the existing functionality of the game and will be able to address any existing issues the quickest. They will also use pair programming and an agile approach to each bug. Every bug will be given a sprint, completing one bug at a time. So if a bug passing the testing after one sprint, the next sprint will be the next bug until the game has achieved the desired functionality. The bugs to be fixed in this process are collision detection and the user's behavior near the boundaries of the game.

Lastly, the front end will take on development of further features. The front end portion of the project is running at full functionality so the team members who were working on this can now direct their attention to adding and enhancing new features. The first feature to be polished and enhanced will be the power ups in the game. These tasks will be completed using the same approach being used for the bug fixes (pair programming and agile). Fixing these three areas of concern will accomplish all the goals we have for Mr-Runner in the near future.

Conclusion

In conclusion, our team had an overall successful experience in all aspects of the project, from building the game to giving presentations. We used many new software methodologies and practices efficiently like are weekly standup meetings. Our game was a great accomplishment, but like anything there is always room to improve and the few mistakes to clean up.