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San José State
UNIVERSITY

CMPE 202 - TEAM PROJECT - WEEK #7

TEAM 8: ILLUSION

Project Group

#8 Team

Illusion

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Team's GitHub Repository:

https://github.com/cmpe202-team8/courseproject

Team's Task Board:

https://waffle.io/cmpe202-team8/courseproject

Team’s Sprint Burndown Google Sheet:
https://docs.google.com/spreadsheets/d/1hWOQLq6E-2FrsQg6gd6JcvweN0vdCQ-lkXzAxPu0m7w/edit - gid=0

Contents

Journal Update from Team Members

1. Ashna Sebastian

Core Value: Communication

This week once gain I want to emphasize on the importance of Communication in Scrum Agile methodology. In Scrum, communication happens mostly face to face through different meetings like the Scrum meeting, Sprint Planning Meeting, Sprint Review Meeting and the Sprint retrospective meeting. Effective communication by asking relevant questions at the appropriate time is very important in Scrum. This is because if there is no communication gap among the team members and between the product owner and the development team, the end product will be as expected with all the features as expected by the product owner. The meeting also provides an opportunity to give a peer review feedback and suggestions which helps the team members to improve their technical and design skills. We are in 7th week of the Team Project and is following the Scrum methodology. As decided, we had 2 weekly status meetings and also another meeting which helped us to integrate and test all the new features developed this week.

This week, during the status meetings we discussed about the design patterns that be implemented in our game design. We need to select atlas 5 design patterns which can be used for our application. The first design pattern selected in the Observer pattern. In a UI based application there can be lot of events and event handlers which should be called based on the events. This can be done using Observer pattern. We can also use Composite design pattern because we have some functionalities wrapper around other. We can also make use of the Proxy pattern, Factory pattern and Decorator pattern. Each one of us will take one of these patterns and use it in our code.

This week we (me and Vaish) tested the already completed pages, the home page, login page, register page and the game level selection page. We identified some issues and fixed these. We also made some changes to the game page design during the first status meeting. We then started coding the html and angular components for the game page. During the second meeting we reviewed the game page html and integrated the angular components. We started integrating the REST APIs in backend and the Angular components in front end. We are using AJAX calls to call the node js REST service from the Angualr js. We started integrating the login and register service and identified some mismatch in the JSON format send by the Angualar in the AJAX call and the message expected by the node js service. We are fixed this issue and currently the login and register is working completely from end to end. The project development is going as planned and we are able to resolve all the challenges faced in the Project during the review discussions.

2. Neha Kumar

Core Value: Simplicity

We met with the team after our 202 class and discussed on the progress done by other team members. I also got my doubts clarified which I was stuck when implementing the backend code. I continued to work on developing services for Binary Test.

1. Creating a collection with questions for quiz for a particular difficulty level.
2. Fetching the questions of a particular difficulty like medium from database and presenting it to user in Binary Test.
3. Also, capturing the response from user and saving value in database.
4. Once the all the responses for a test/quiz is captured, the users score is calculated based on correct responses.
5. After calculating the score, rank is calculated and if his scores fall in best 10 scores, his score and username is displayed on Score board.

Other team members are working on integration of UI and backend code, we have also started working on Documentation like Sequence diagram, since we have almost completed the backend code.

I believe that we are on track of the work we anticipated because we stick to the idea of meeting all requirements which is the main idea of XP core value Simplicity – Develop a simple application which meets all the client requirements and then add more advanced functionalities on top of it.

3. Rakesh Datta

Core Value: Feedback.

UPDATES:
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This week I have designed a login app that implements the bloew modules:
- login local
- login facebook
- login google
- session management remote

These are designed using node.js, passport.js, express.js and bootstrap. I have created
a node module called gamelogin that will initialize and provide the above mentioned features.
It has dependencies on other standard node modules mentioned in the package.json.

For local login, the app creates a user collection in the mongodb, using the mongoose
client. The register module allows the user to create the credentials. Local login
ensures that the user is authenticated as per this database. For this we used
passport-local strategy.
For Facebook & Google login I have used passport-facebook and passport-google strategy.
In both the cases I had to create an appID in the facebook and google. It gave me
a authentication ID and key which is used in the login app. This ensures that our
login app is allowed to use the Facebook and Google login database.
Passport.js helps to maintain the session.

XP Value (Feedback):
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This week we have setup demonstration of individual work so far. Everybody was assigned
some time to demonstrate his/her work along with code walkthrough. Then we brainstormed
and provided feedback to the module owners. This not only helped the module owners
verify the correctness of their work, but also made the team aware of the current health
of the project, burning blockers and any redundant work if any. All the team members
took the feedback constructively. And we decided to have one further round of demonstration
after incorporating the changes. One of the module owners made the design little complex.
A demonstration in front of the team and a follow-up demonstration really made the design
very simple and reduced the complexity. This peer review session increased the overall quality
of our app and I believe this is an excellent exhibition of the XP Core value feedback.
Since we have reached the end phase of the project, we have decided to increase the
frequency of this demo and peer-review sessions. This will ensure that the module owners are
on
the right track, we meet the deadlines and we deliver and absolutely quality product. This XP
value
is now one of the most crucial points at this phase.

4. Vaishampayan Reddy Pathuri

Core Value: Courage

This week we met for integrating things and working on the game. One of the core values of XP is Courage. Every team member has shown extra-ordinary courage while discussing about implementation and their design discussions. This means that they have to stick to their design decisions and at the same time be open to everybody's criticism. Throughout our 7 weeks of project work, everybody maintained their calm and were showing good courage. This week we discussed about how to integrate the models together and integrate the backend. As we are using the angular js framework to user the front end with backend a lot of our work was easier. This week we also planned about the design patterns to be implemented in the backend. As

Professor suggested that every member of the team must implement a design pattern in the backend.

Implementing a design pattern in functional language like JavaScript was difficult. Unlike an object oriented programming language like Java, JavaScript is difficult to use the concepts of inheritance, polymorphism etc. So we all put our minds together and saw some good examples online as to how to implement these. We got some idea as to how to implement and we increased our understanding by doing a brainstorming discussion. This was fruitful in a certain way. We were not completely clear about it, but knew that by starting the coding work using these patterns we will progress a lot and understand how this is working. In the UI me and Ashna discussed about how to use observer pattern for implementing multiple event listeners on different UI components. This can be done easier using an observer pattern. The other patterns that we discussed were Factory Pattern, Proxy Pattern and Decorator pattern.

5. Vimal Muraleedharan Nair

Core value: See the Whole

We made good progress related to API development. The overall development process has been divided page and each person from the backend has taken each of the pages. I am currently working on the Login related API's. Majority of the functions related to Login includes register, login, session creation, Single sign on. Each of these functions are handled by separate API's. The major difficulty was faced while creating API for Single Sign on, which is obviously a complex module. There are lot of factors which are taken into consideration while creating SSO, since its more of a third party service. We have signed up with the google developer console to get access for the SSO for Google Account. This will ease out the process of creation of registration, basically the user can skip pass the registration with the use of Single Signon. Hence we choose it to be included in our service list.

Apartment from SSO, all the login related services are hitting the Mlabs service which is hosted at the mongo cloud. This service is highly scalable and elastic so that we can scale it as and when needed. When at some future time when we want the application to be used by lot of users, we should not restrict our services in way it restricts scalability. So we took take of that concern in our design. All my services required lot of validation rules, which is another painful task while creating all the services. We tackled this concern by having a meeting and discussing all the validations related aspects and collecting all the items before starting with the development. This way we made sure that we are covering all the aspects of the proper validation. This indeed was a fruitful approach in delivering quality software product to the end user. Being a responsible software engineer, we have to make sure there are no setbacks in our product related to validation before deploying the product. So in all these project related activities we made sure that we are thinking about the future, when we do even a small task. We are maintaining proper documentation for all the project artifacts and whenever we have discussion we make sure that rather than solving the problem, we fore see similar problems so that we can avoid occurrences of instances in future. This is clearly is an example of See the whole capability of our development process. We are indeed very happy to say that we give attention to even minute level details during the development process. All these definitely attribute to the 'See the whole' core value. We are smoothly progressing to the finishing of the project; the expectation is that we will wrap up the total project by third week of this week. We do plan for giving some time for the complete system testing and also releasing the product to a small set of people to get feedback from them.