ASE

Advance Software Engineering Project Increment-3

Fall 2016

Submitted By (Team 7):

Pruthvi Raj Reddy Chukkannagari
Moulika Chadalavada
Santhosh Kumar Gattu
Bhargav Krishna Velagapudi

Table of Contents

1. Introduction

IM WORD

IM Word Project is a world building gaming hybrid application. The game mainly focus on improving vocabulary building of users using images. So, this application increase user's knowledge by learning new words using images.

Each user will have a separate account, so every user must register before starting game. User can also login through Facebook or google. Once user Logs in application consists of various features implemented in game. User can Play with Words, Identify Logos and Celebrities, Logo Recognition (when company URL is given company's logo and details are displayed). Each section further has Kids Zone and Adult Zone. Kids Zone contains levels with easy words with are easily answered by kids and in Adult Zone the Level increases and difficult words are given to Adults. Each zone has different Levels, so as user has different account their status is tracked in Database. We have integrated all the features and used REST API's with an interactive user experience.

2. Objectives

2.1 Overall Goal

The main objective is to implement a vocabulary building application for adults and kids. Also in this application, we are using image processing API's for analyzing images.

2.2 Specific Objectives

"IM Word" application is game that is fun with learning. Kids can learn new words, numbers, know about images so that they show more interest on playing with learning. For Adults, this game helps to reduce stress and learn new words with high vocabulary.

3. Features

The main features of this application involve in vocabulary building and logo identification.

Vocabulary building: User learn vocabulary with images. User is displayed with continuous images on recognizing correct word of the image. Once the image is recognized the spell of the word is given to the user. So, that they can learn the exact pronunciation. The user score will be updated in the database based on levels completion, so user can view scores at any point of time. When the user reaches end of one Level user will be redirected to next Level.

Words pronunciation: Once the user find the correct image the pronunciation of the word is given to user, so that they can learn exact spell of the word.

Logo Identification: This is very interesting feature where the user can play with Logos. The logo image is given to user who must recognize to which stakeholder the logo belongs to. Also, user can enter company URL to get their logo and respective companies details.

4. Existing Services/API

For this increment, we implemented Full Contact API, Cordova OAuth, Firebase cloud services.

In next increments, we will be using Clear bit company logo API, Vision API, IBM Watson Analytics API.

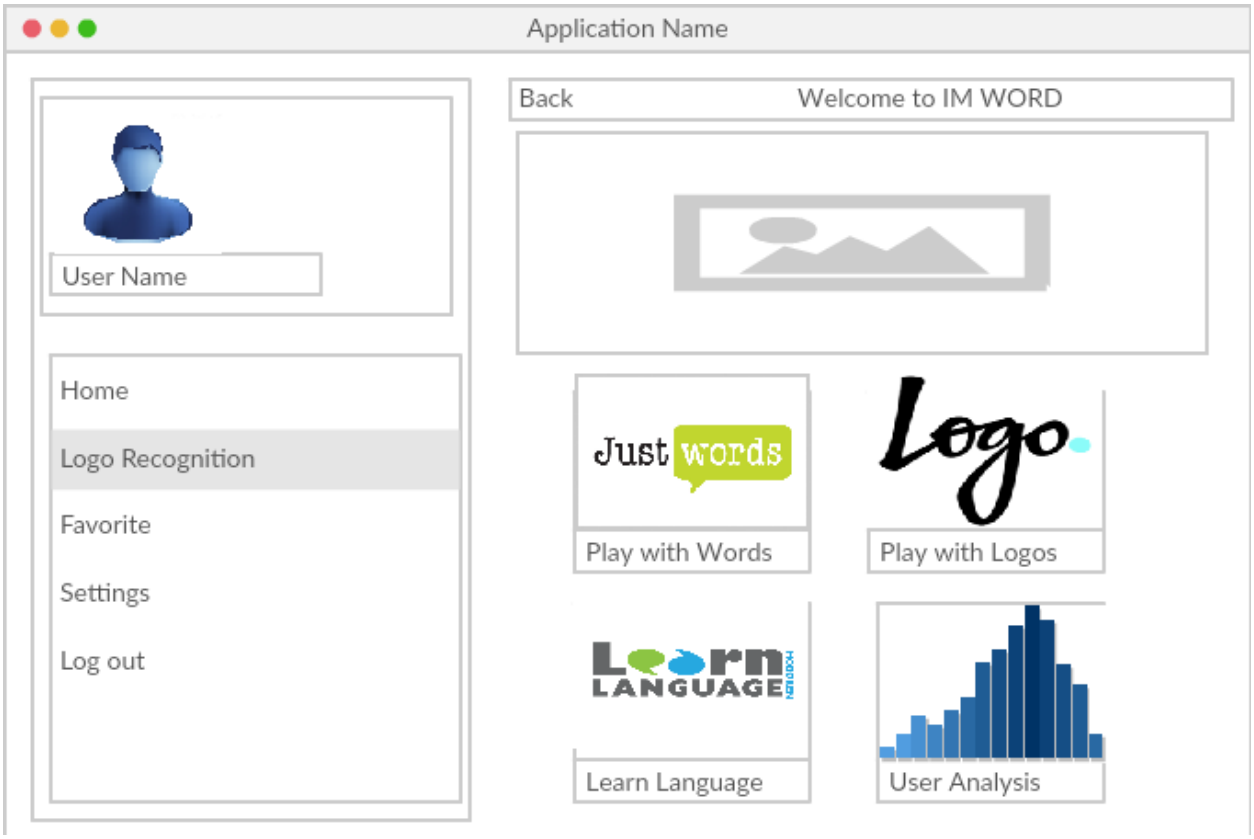
Software's/Tools Used: WebStorm, Node JS, HTML, CSS, AngularJS

Web Server/Database: Amazon AWS, Firebase

5. Detail Design of Features (using tools)

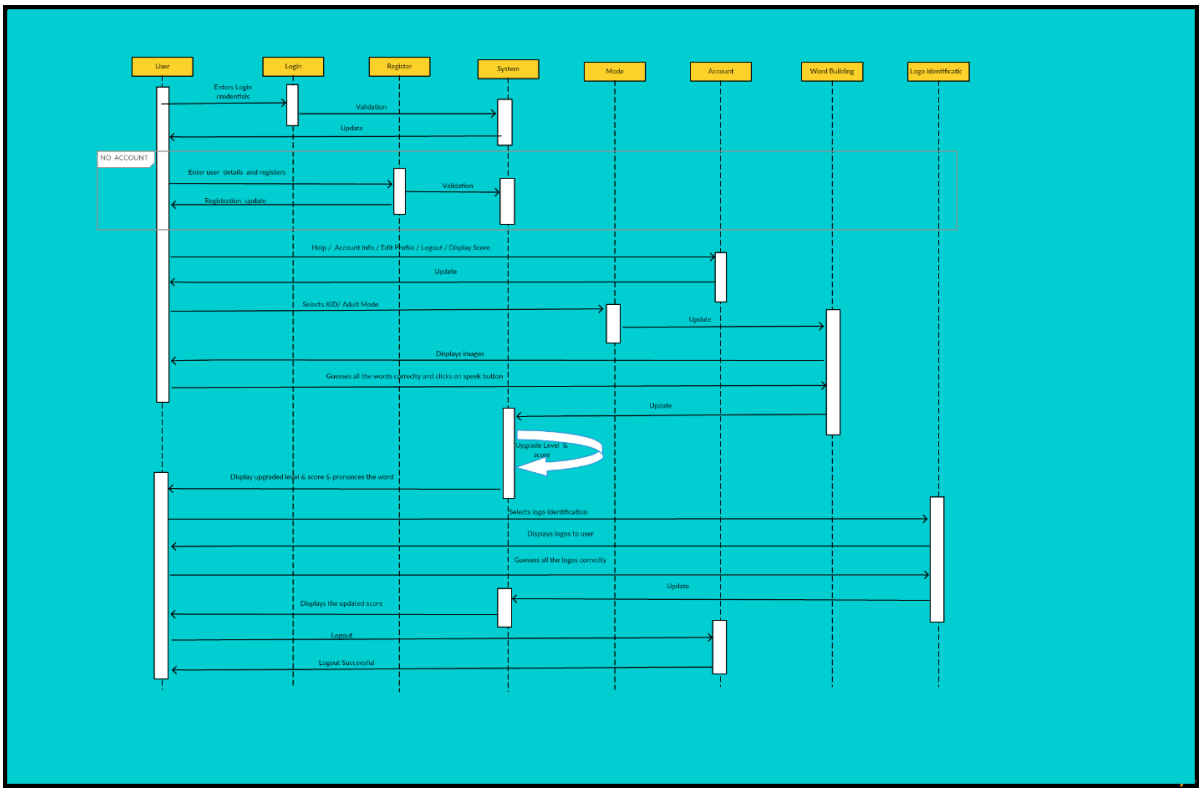
5.1 Wireframes and Mockups

Wireframes for Home page:

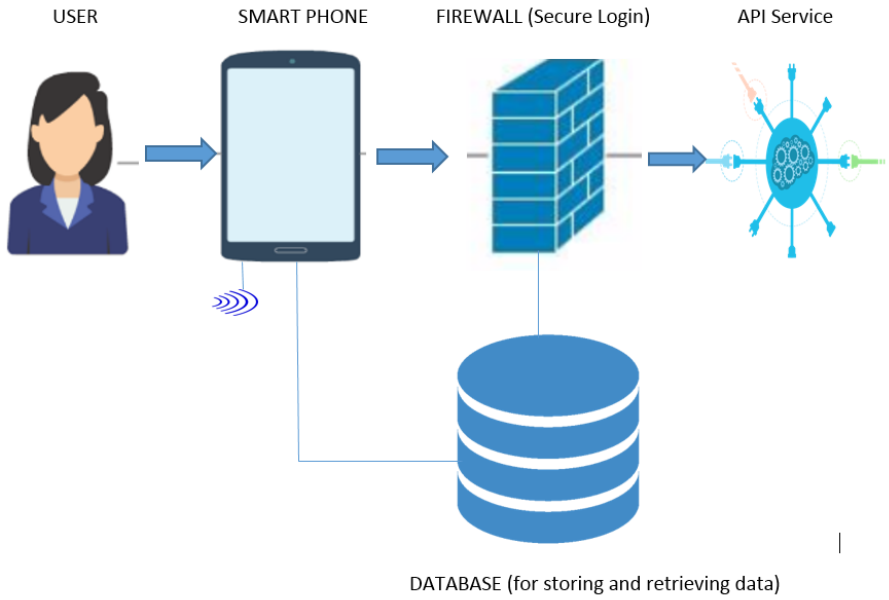


5.2 UML Diagrams

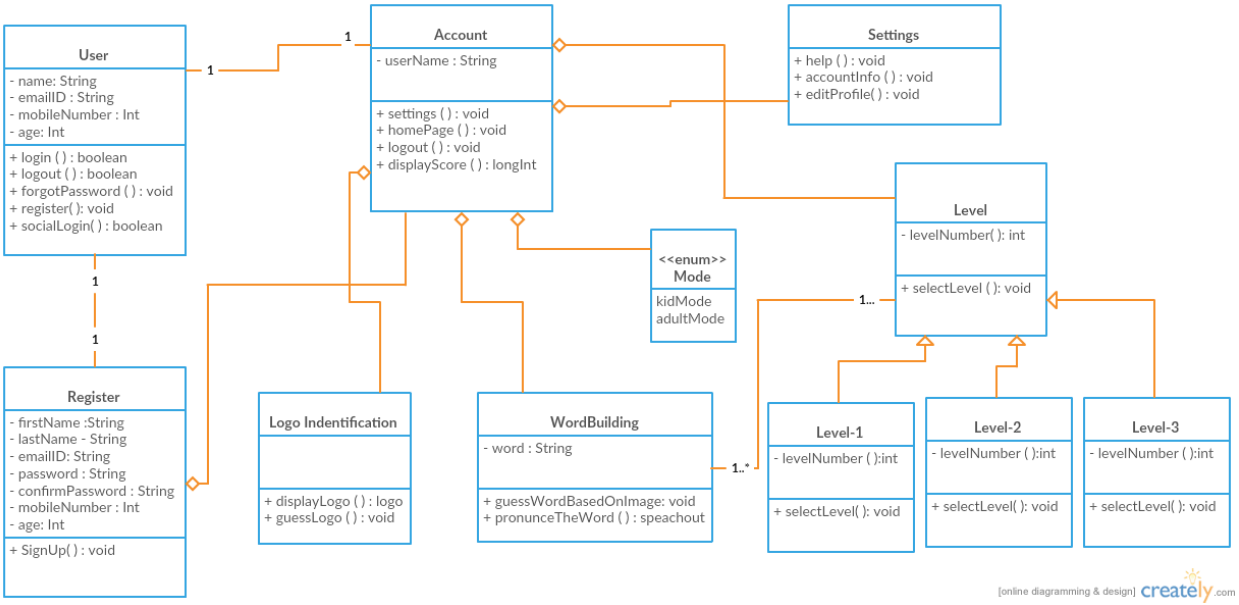
5.2.1 Sequence Diagram



5.2.2 Architecture Diagram



5.2.3 Class Diagram



6. Implementation

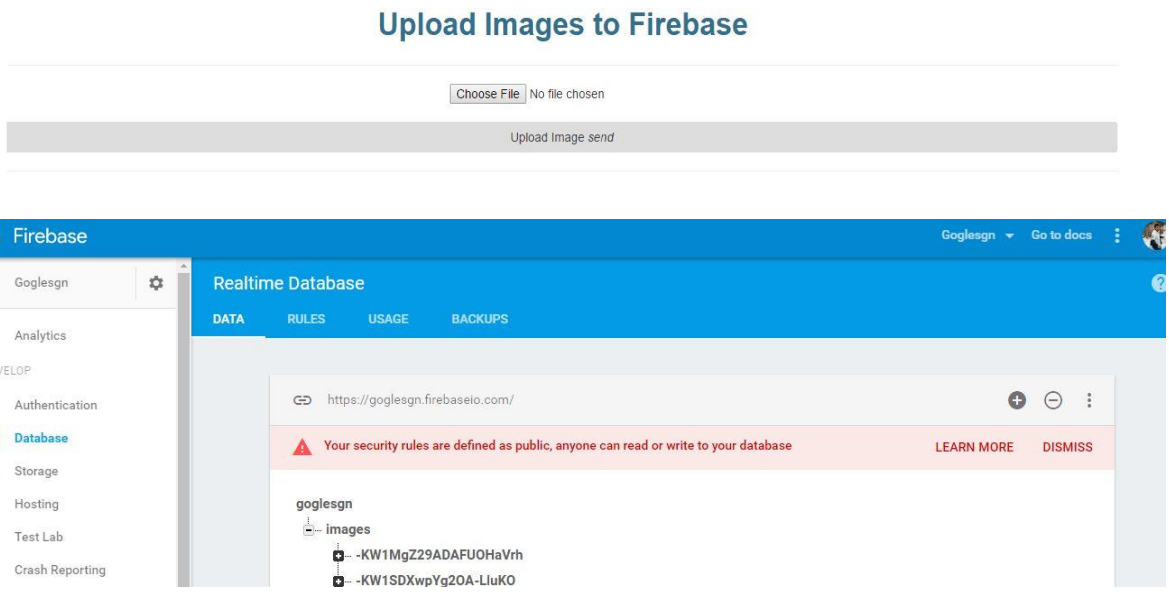
In the previous increments the login and registration pages are designed and using Firebase the user credentials are stored. Also, implemented social login using Facebook, Google. In the Setting page user, can update account details.

Increment 1:
https://github.com/pruthvi6767/ASEFall16/blob/master/Project/Increment_1/Documentation/ASEProjectPlanIncrement-1.pdf

Increment 2:
https://github.com/pruthvi6767/ASEFall16/blob/master/Project/Increment_2/Documentation/ASE_Project_Increment2.pdf

In this increment, we have designed home page which contains four sections to play with words, play with logos, learn language with words and user analysis. Under each section two zone were divided i.e. Kids Zone and Adult Zone. Further under each zone levels were divided so that user must play per levels. Images are uploaded are stored in Firebase, so that they can be fetched and displayed in Home screen. Under Learn Languages section the user can know the languages with words. Deployed this chat application in Amazon AWS.

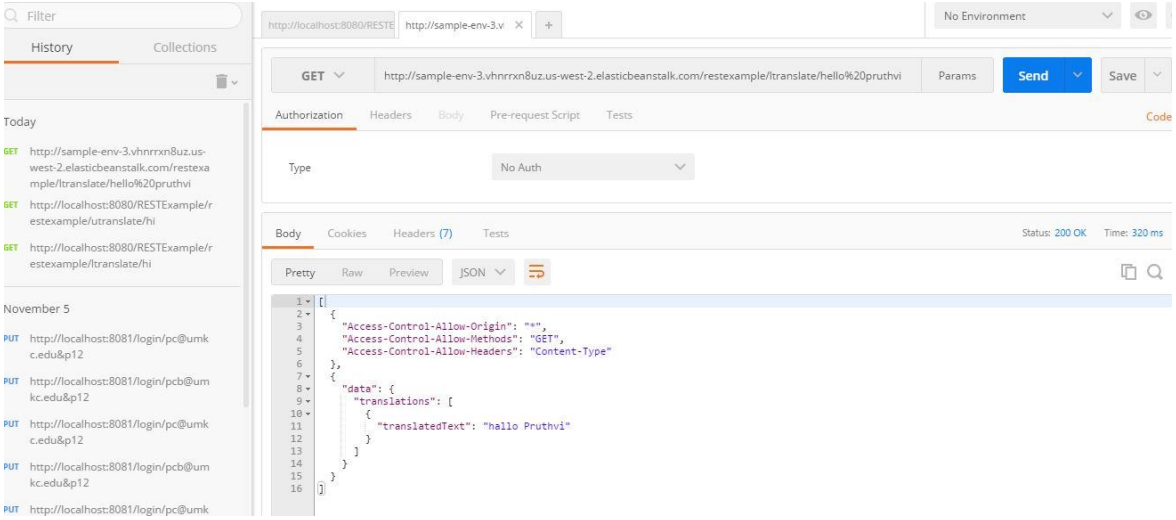
Initially the images are collected and are uploaded to firebase from Local using below screen. Uploaded Images ID and data is stored in Firebase.



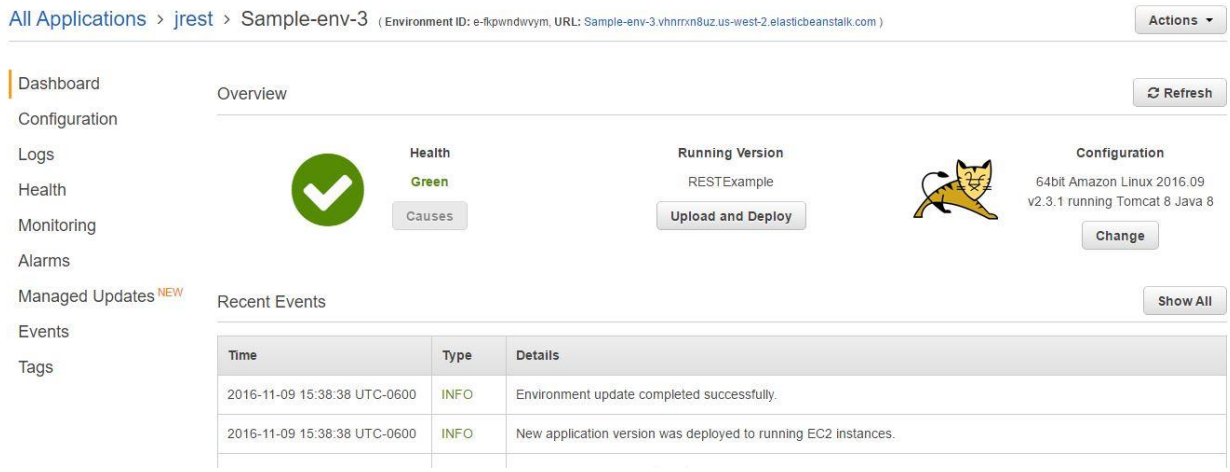
Once the user logs in successfully, the below home page is displayed where user can play with words, logos and Learn Language. If the user clicks on any of the icon another page is redirected where user has two sections Kids Zone and Adult Zone.

Once the user selects the zone there are different levels where user can enter Levels and play game.

Also, developed a service where user can enter message in chat and the response for the same is given to user from server in different languages. This service is deployed in Amazon AWS.

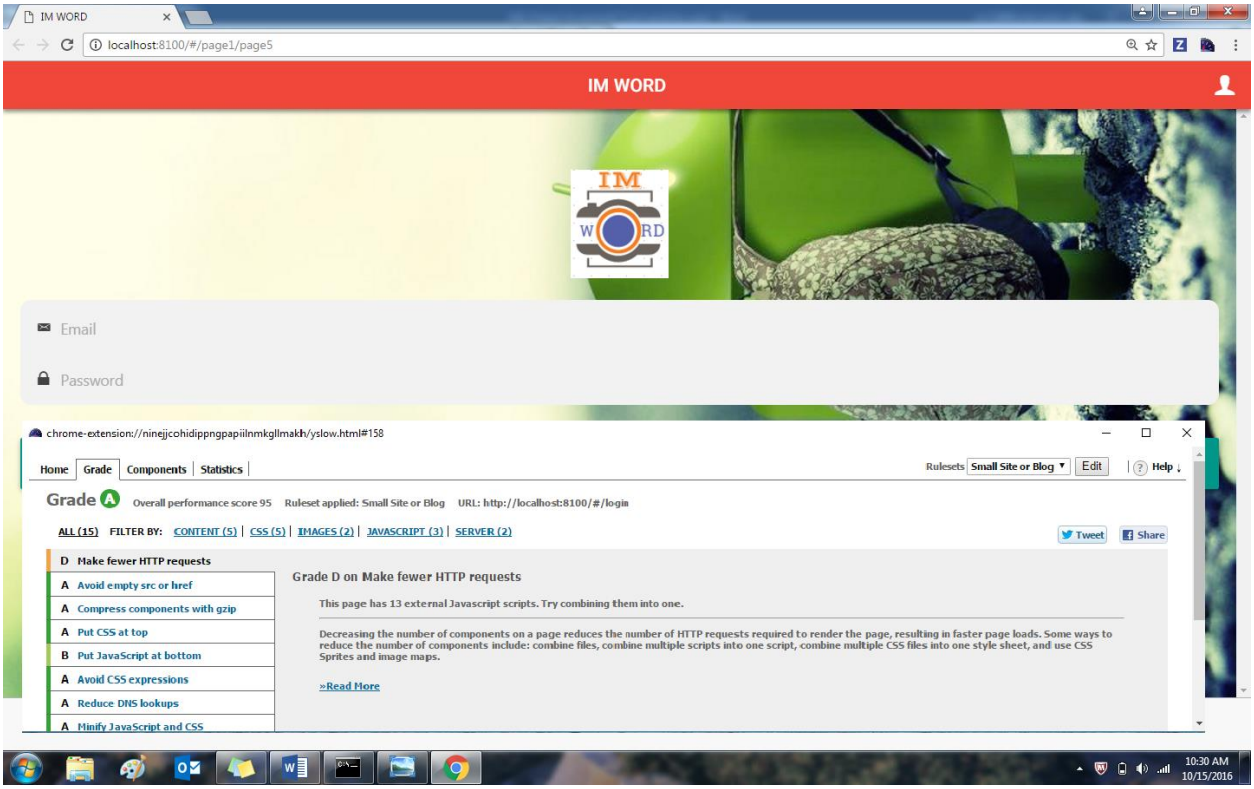


http://sample-env-3.vhnrrxn8uz.us-west-2.elasticbeanstalk.com/restexample/ltranslate/hello%20pruthvi



7. Testing

- Page performance and ranking is checked using YSLOW analyzer



Test Case No.	Test Case Name	Pre Conditions	Expected Output	Sample Input	Status
1	Login with null values	If user has not entered email id and password	Validation will be thrown to user to enter mandatory details	Email id : null Password: null	Pass
2	Login with invalid email id	If user has entered email id without '@' and '.' symbol	Validation will be thrown to user	Email id : moulika	Pass
3	Login with credentials that are not in firebase	If user entered email id that is not in Firebase	Validation will be thrown to user to enter valid email id	Email id : mm@gmail.com Password: mmmmmmm	Pass
4	Valid credential in Login page	If user has entered valid email id and password that is there in firebase	Successfully redirected to home page	Email id : mouli@gmail.com Password: moulika1992	Pass
5	Registration with null values	If user tries to Sign with null values	Validation will be thrown to user to enter mandatory details	Name : null Email id : null Password: null	Pass
6	Registration with invalid email id	If user has entered email id without '@' and '.' symbol	Validation will be thrown to user to enter valid email id	Email id : moulika	Pass
7	Registartion with already registered user	If user entered email id that is already registered in Firebase	Validation will be thrown to select another email id	Email id : moulika.ch@gmail.com (Already registered email)	Pass
8	Registration with all valid details	If user entered all valid details such as Name,Email id,Password	Successfully redirected to login page from where user has to login	Name : Moulika Email id : mouli.c25@gmail.com Password: moulika123456	Pass
9	Displaying images from Firebase	When user successfully logged in	Then in home page the user should be able to start game with image that is loaded from Firebase		Pass

8. Deployment

- We have deployed the application in mobile and captured the screenshots.
- Also, deployed the same in web application.
- We have explained them in detail under Implementation section above.
- GitHub URL for the project documentation and source code
  https://github.com/pruthvi6767/ASEFall16/wiki/Project-Increment-3

9. Project Management

9.1 Project Timelines, Members, Task Responsibility

9.1.1 Work Completed

Description:

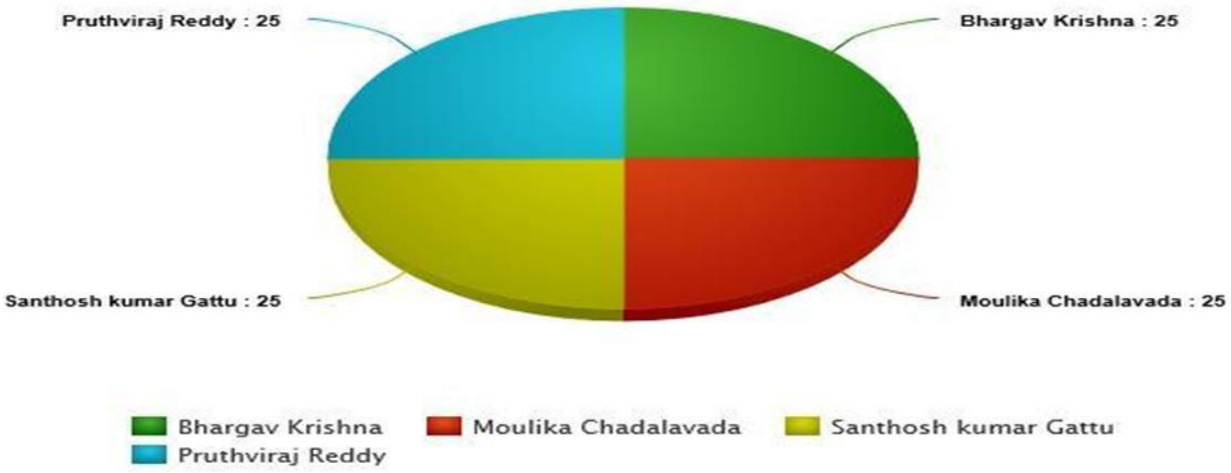
For this increment, we are storing images in Firebase and displaying the images on user screen. These images are uploaded on different levels basis and the bifurcation is made for Kids and Adults.

Also, developed a service like chatting where enter user message is returned in different language from Server. So, that the user can learn different languages.

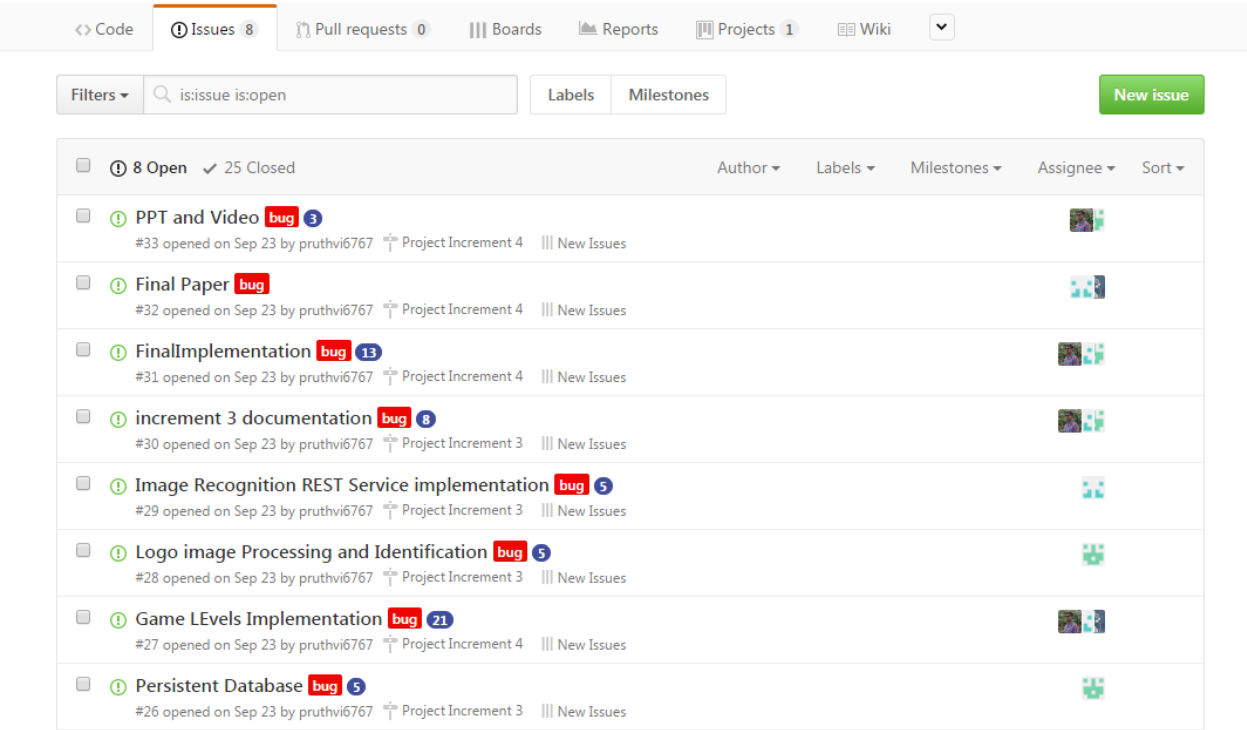
Responsibility:

S.NO	Team Member Name	Task Assigned	Status
1	Pruthvi Raj Reddy Chukkanagari	Collecting Images for Kids Zone Uploading respective images in Firebase Documentation Building Logic to connect to Firebase to upload images	Completed
2	Moulika Chadalavada	Collecting Images for Adult Zone Uploading respective images in Firebase To display the uploaded images on Home Screen Documentation	Completed
3	Santhosh Kumar Gattu	Collecting Images for Kids Zone Uploading respective images in Firebase Chat with users and deploying in AWS Documentation	Completed
4	Bhargav Krishna Velagapudi	Collecting Images for Adult Zone Uploading respective images in Firebase Designing Logo page for bifurcating different levels Documentation	Completed

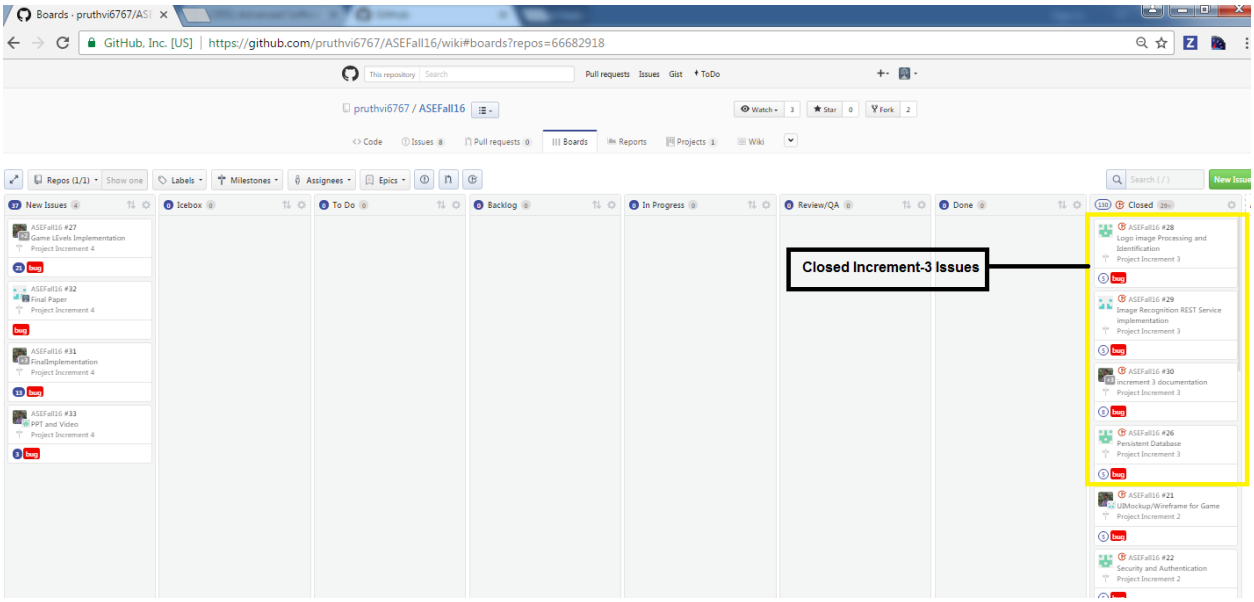
Time taken: 50 hours



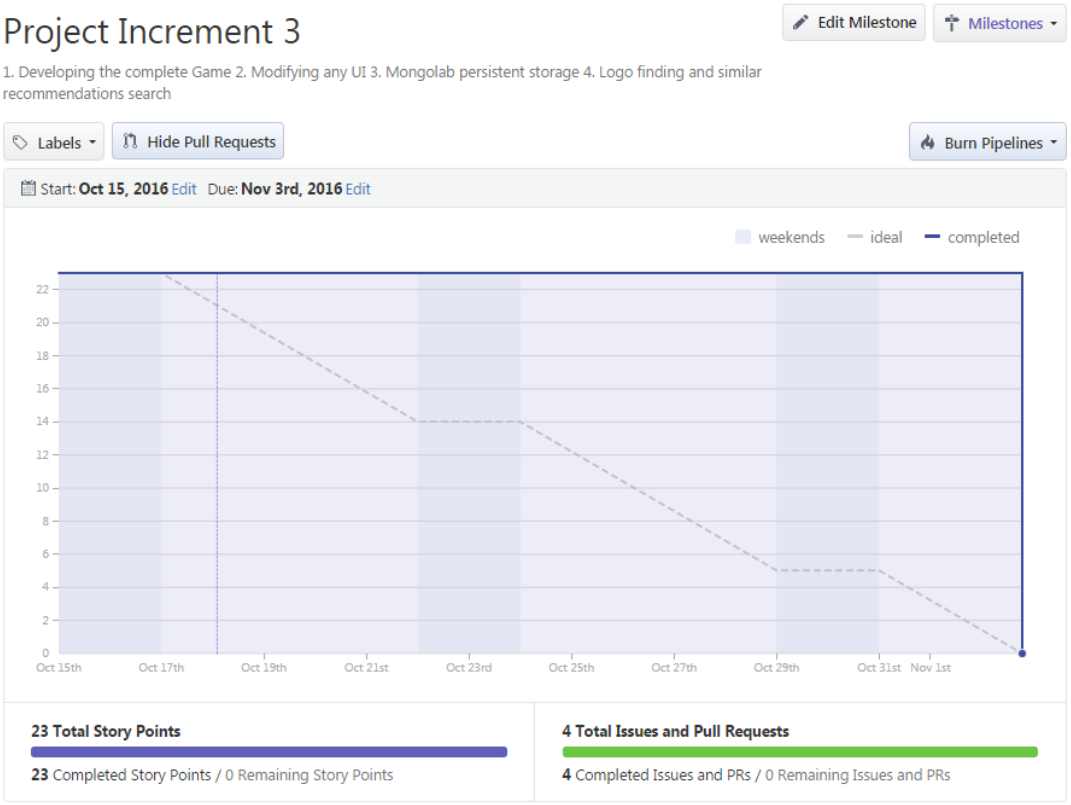
ZenHub Issues



ZenHub Board



Burndown Chart



9.1.2 Work to be Completed

Description:

For the next increment, we are planning to complete rest of the project.

Responsibility:

S.NO	Team Member Name	Task Assigned	Status
1	Pruthvi Raj Reddy Chukkanagari	Text to Speech Recognition Comparing with other users	Not started
2	Moulika Chadalavada	Sentiment Analysis for Text Celebrity Image Recognition	Not started
3	Santhosh Kumar Gattu	Gaming Logo UI modifications Get scores for users	Not started
4	Bhargav Krishna Velagapudi	Word Game UI modifications Collecting Images	Not started

Estimated Time: 90 hours

9.2 Issues/Concerns

Initially faced problem in uploading images to MongoDB after referring to various to sources. Tried to load it using GridFS but it did not work because uploading images in Mongo DB directly is not a better idea without any server such as Amazon AWS.

So, we finally got a way to upload images in Firebase database. We developed a webpage that uploads files from local to Firebase. Each image is differentiated with id.

10. Bibliography

http://stackoverflow.com/

http://grepicture.wordpress.com/2009/01/22/a-list-1-10/

http://ionicframework.com/

http://ngcordova.com/docs/plugins/