
Sarvajanik College of Engineering and Technology

**Computer Engineering Department**


## Project Presentation

On

# "Score GREat"

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# PRESENTATION OUTLINE

- Problem Summary
- Solution
- Modules
- Database Design
- Implementation
- Conclusion and Future Scope

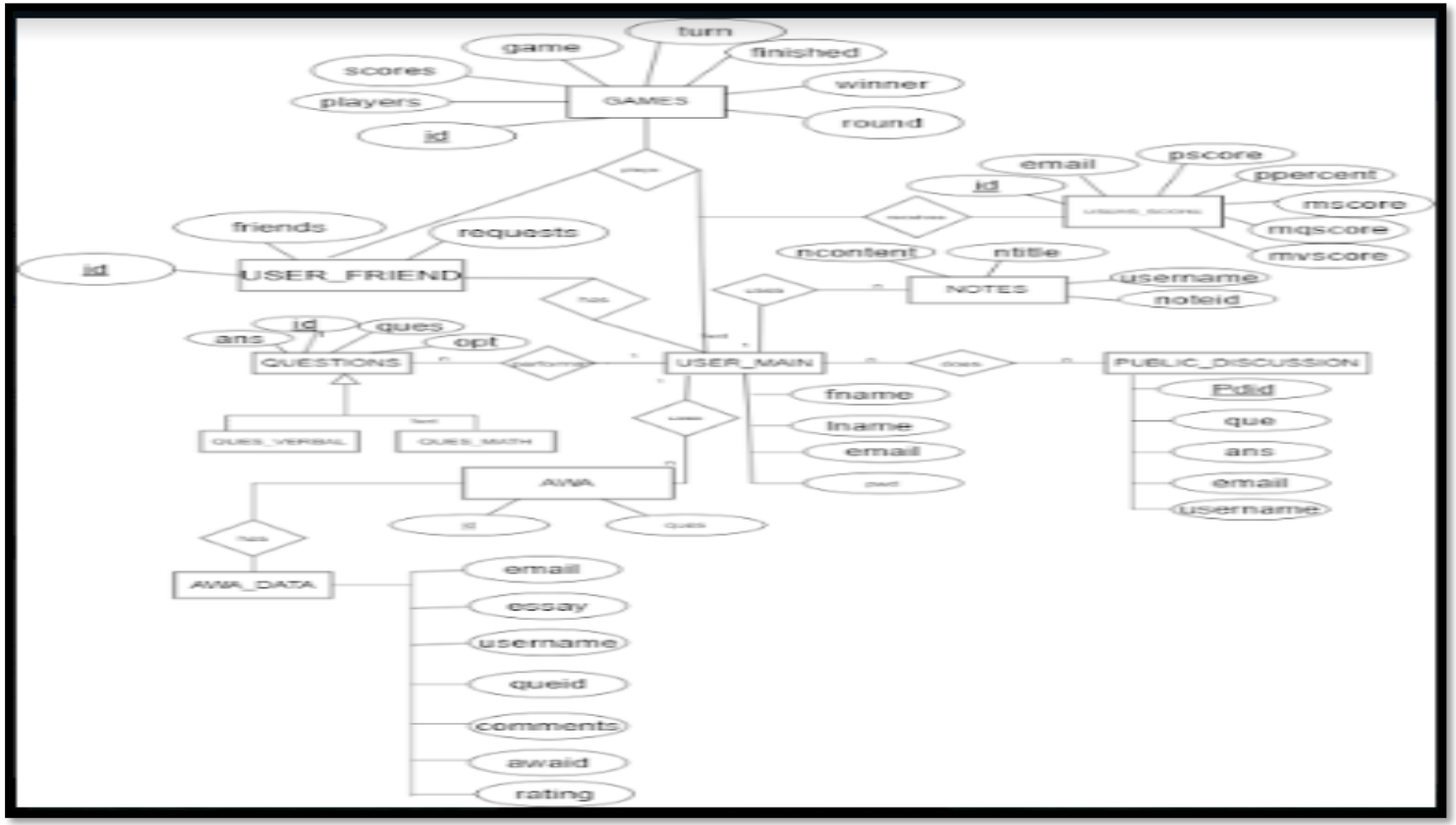
# PROBLEM SUMMARY

- Most of the websites that provide adaptive learning for GRE do not have all the features like practice questions for quants, awa portal, verbal questions, etc. within itself to completely nurture the student's capability all by itself.
- Thus, the student needs to look for many other resources outside the websites.

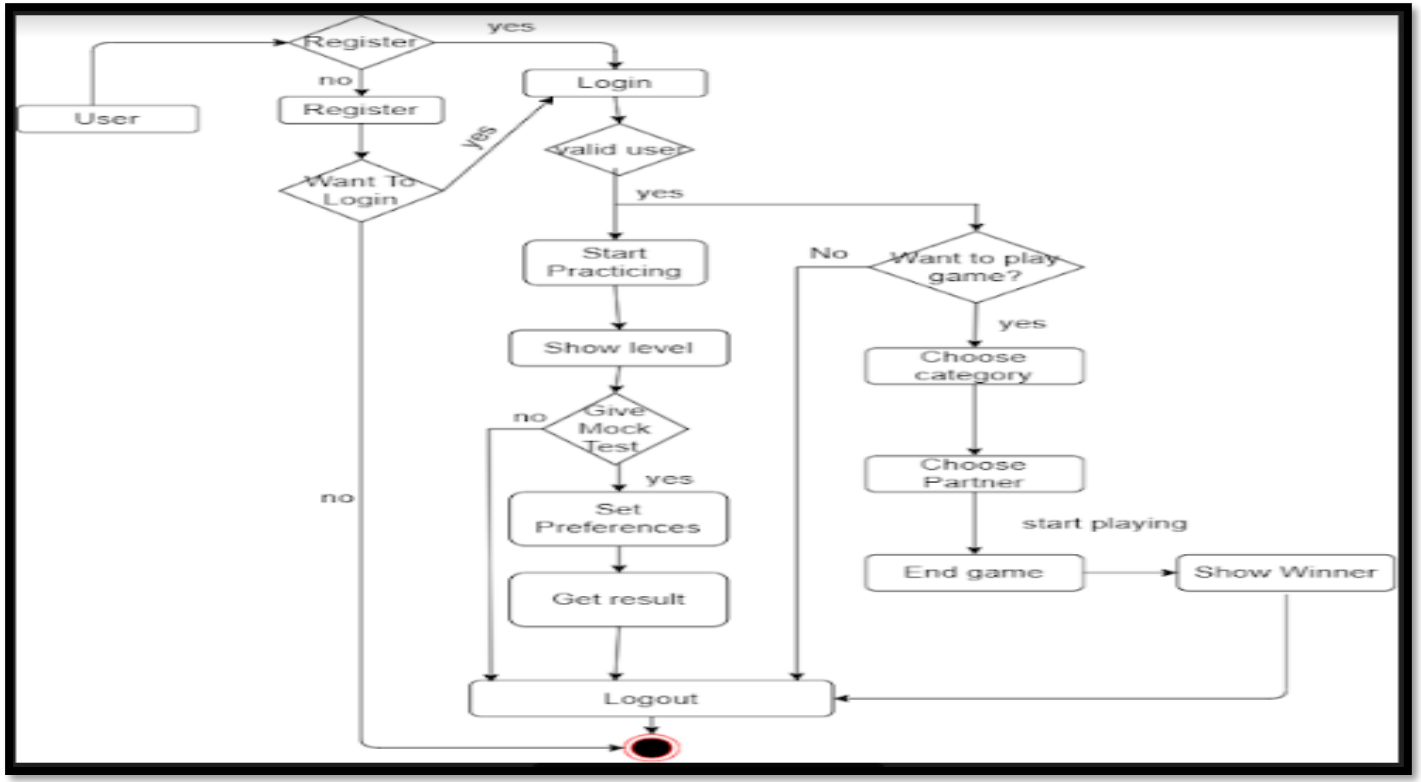
# SOLUTION

- Thus, we by making Score GREat aspire to make an adaptive system for GRE test preparation a one stop spot for all the students.
- To achieve this we intend to add various innovative and effective features which are not available in existing application.
- **Score GREat is an one stop spot for any student aspiring to appear for the Graduate Record Examination (GRE).**
- It will consist of tons of questions from various chapters spread across various levels for both quant and verbal section of GRE and every user will have a personalized preparation experience courtesy of the performance based machine learning algorithm that we intend to create.

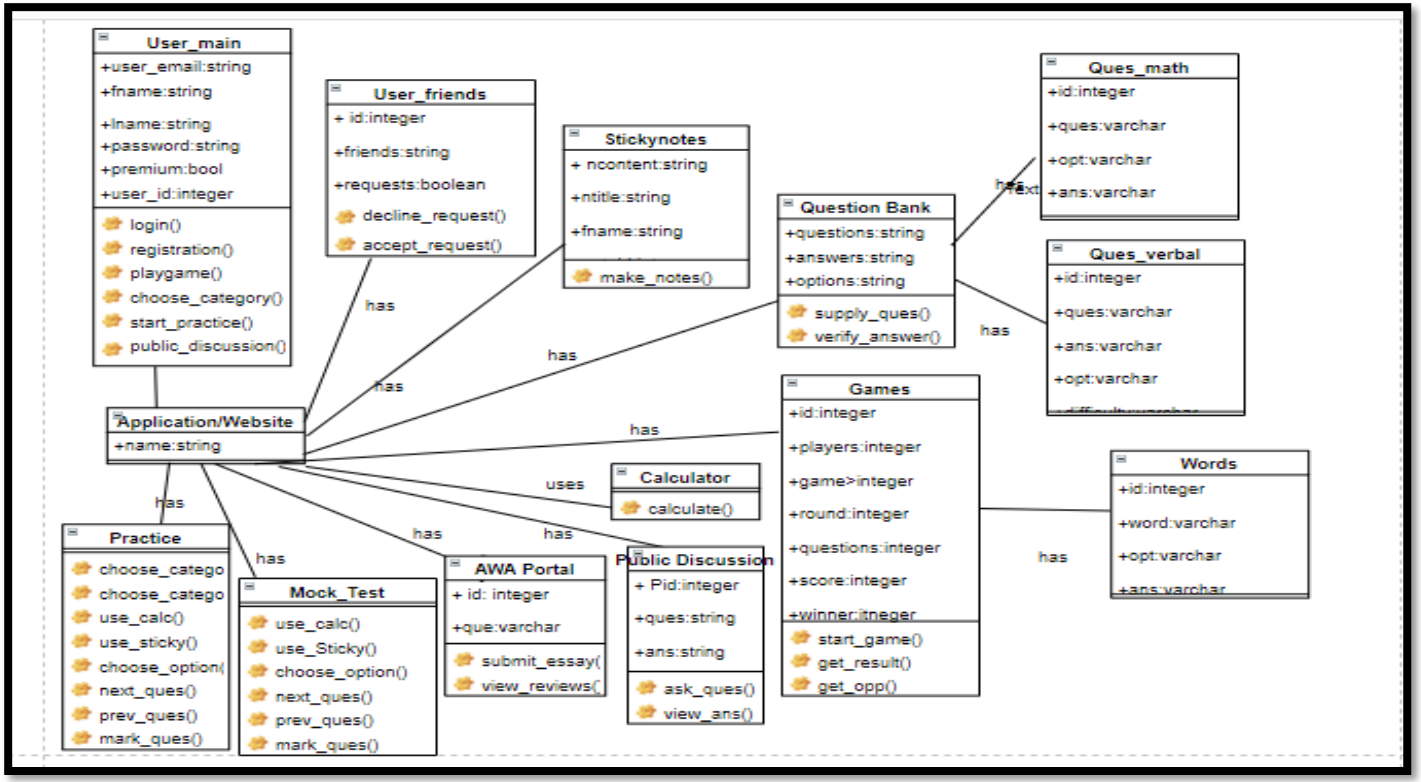
# Database Design



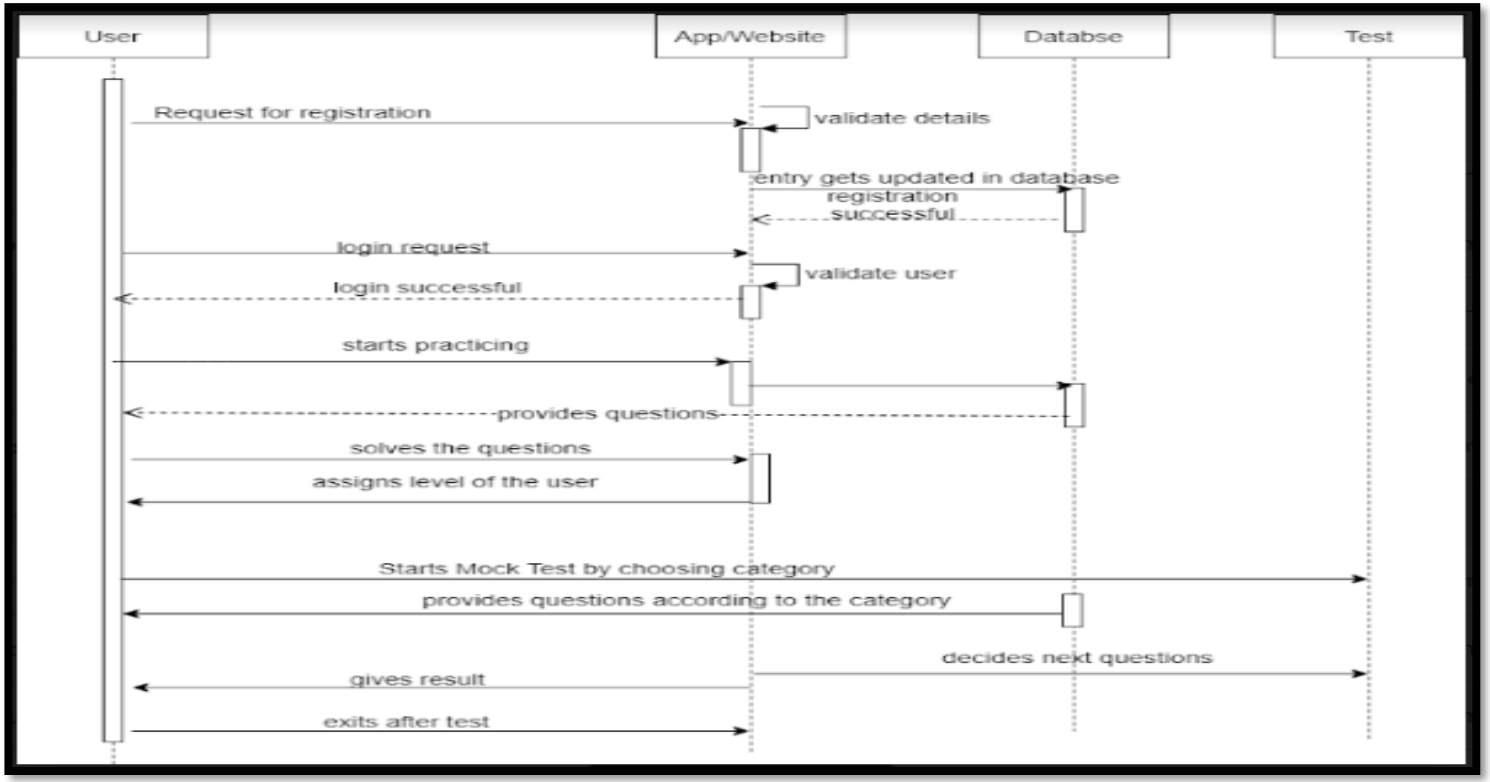
# Activity Diagram



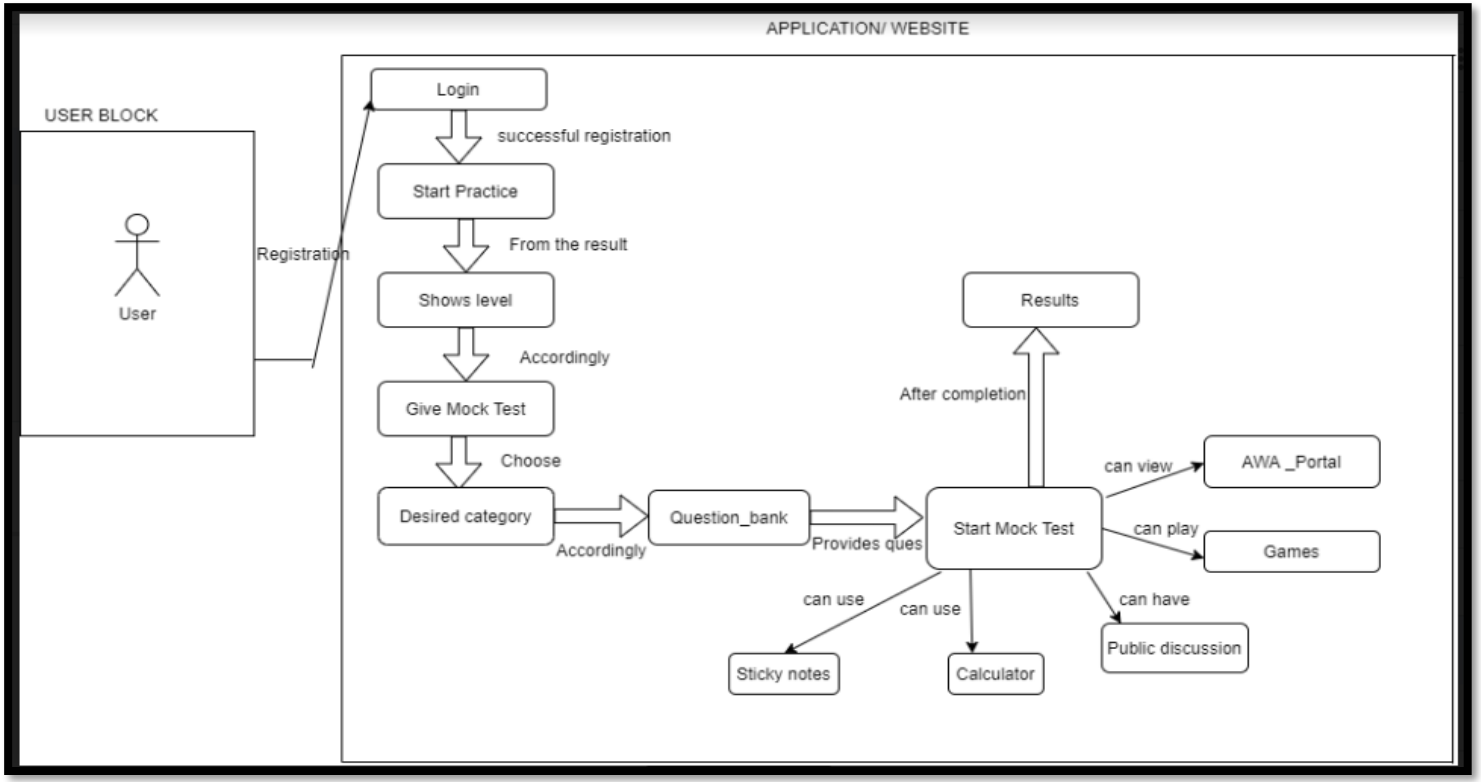
# Class Diagram



# Sequence Diagram



# System Flow


APPLICATION/ WEBSITE
USER BLOCK
User
Registration
Login
successful registration
Start Practice
From the result
Shows level
Accordingly
Give Mock Test
Choose
Desired category
Accordingly
Question_bank
Provides ques
Start Mock Test
After completion
Results
can view
AWA _Portal
can play
Games
can have
Public discussion
can use
Calculator
can use
Sticky notes

# Machine Learning Algorithms

- The next part of application is how categorized questionnaire will come one after another according to the questions answered by user.
- This can be achieved using the basic machine learning algorithm.
- The basic algorithms are
  - Support Vector Machine (SVM),
  - Naive-Bayes,
  - Linear Regression (weighted),
  - Linear Regression (unweighted) and
  - Decision Tree Algorithm etc.

# Machine Learning Algorithms

- But from the analysis of studied research paper we concluded that SVM and Decision Tree algorithm were most efficient algorithm for categorical data .
- As per the research paper we have studied, Decision tree algorithm can be efficient for our project.
- It is a classification method. In this algorithm, we classified into different groups based on multiple attributes to identify. To split the population into different heterogeneous groups, it uses various techniques like Gini, Information Gain, Chi-square, entropy.
- For our project , dimensions that can be used are questions , number of students answered the question, and time taken by the students to solve particular question.
- From this , we can categorize data and then can decide the difficulty level of questions.

# TECHNOLOGIES USED

- HTML5
- CSS3
- Bootstrap
- JavaScript
- jQuery
- AJAX
- PHP
- MySQL
- Python

# TOOLS USED

- VS Code
- Sublime Text Editor
- 000webhost text editor
- Jupiter Notebook
- AWS RDS

# Modules

- Practice Module(Main Module)
- Analytical Writing Assessment and AWA Review
- Public Discussion Forum
- Multiplayer Games
- Saved Notes

# IMPLEMENTATION

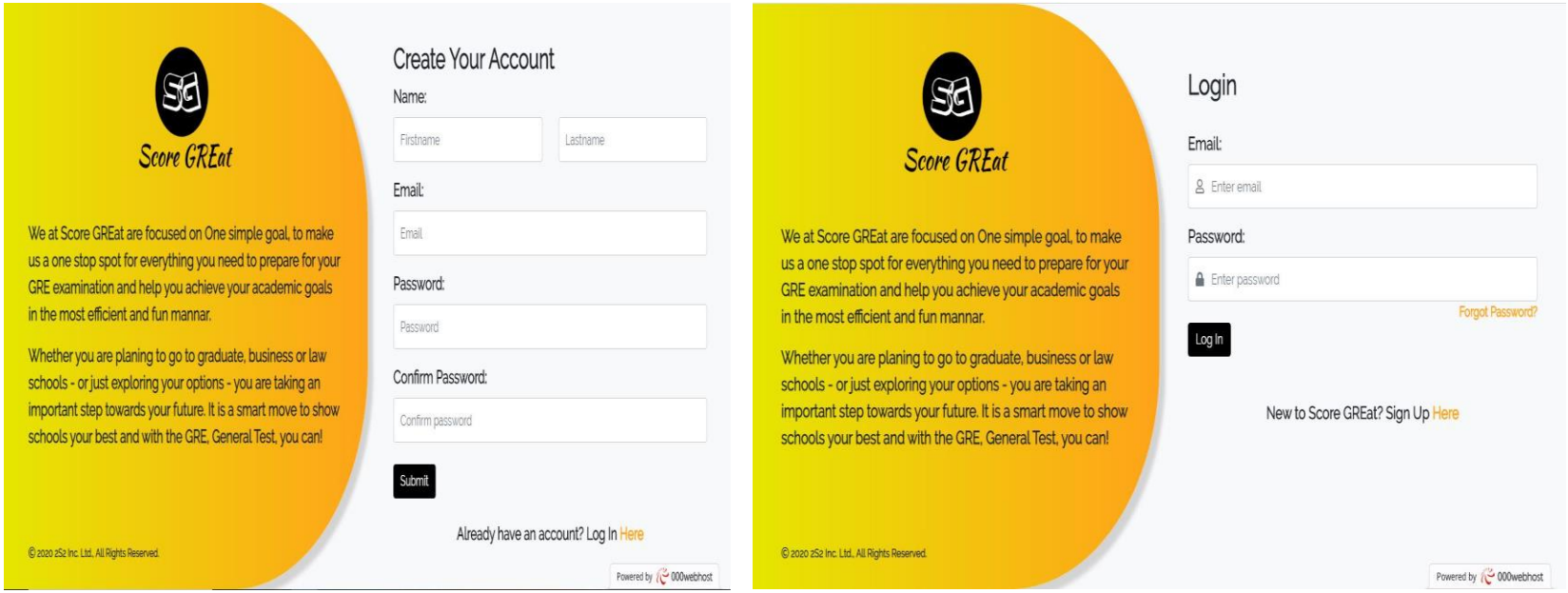



Fig.(1): Sign Up and Log In

# IMPLEMENTATION(CONT…)


Fig.(2): Dashboard

# IMPLEMENTATION(CONT...)

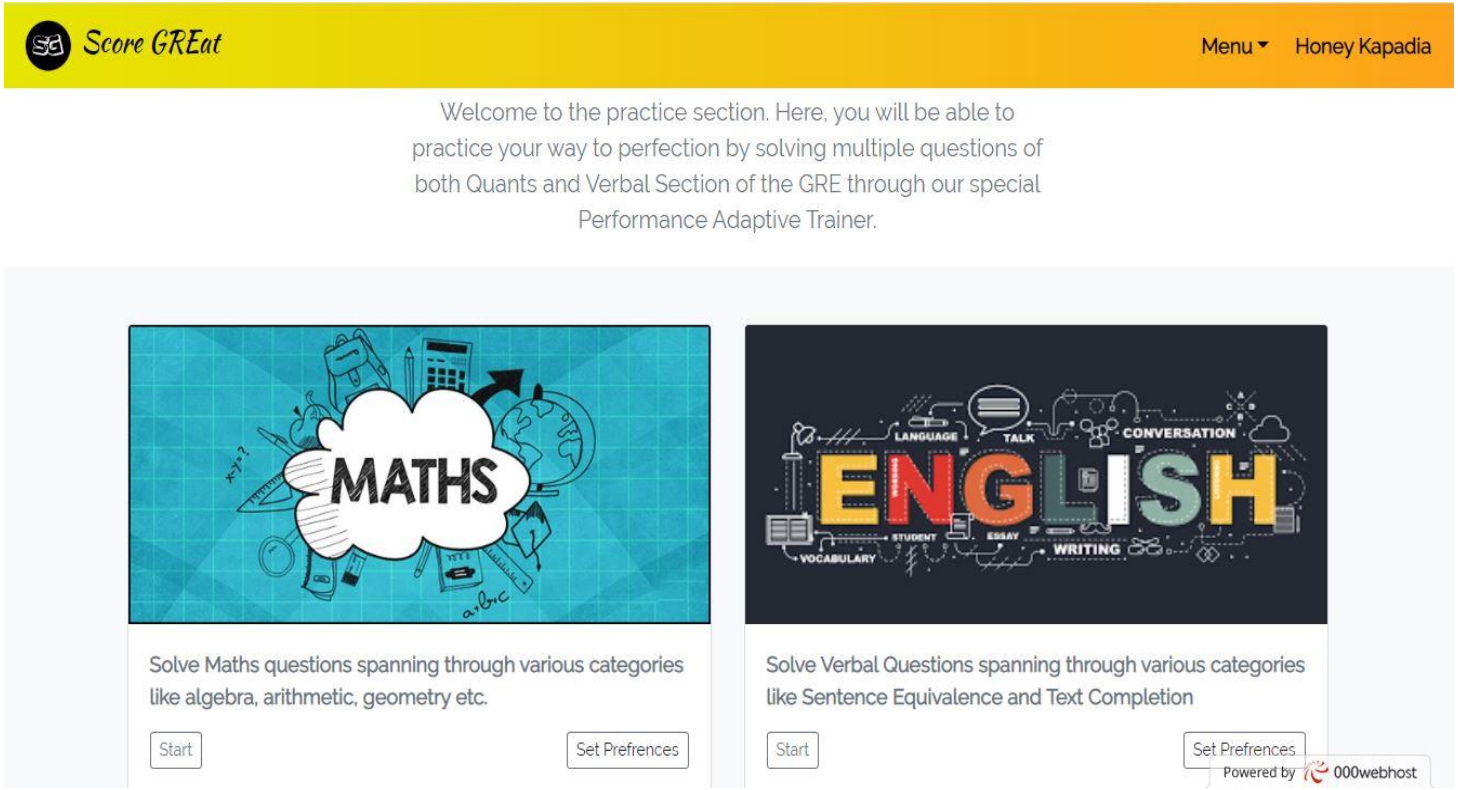



Fig.3(i): General practice

# IMPLEMENTATION(CONT...)

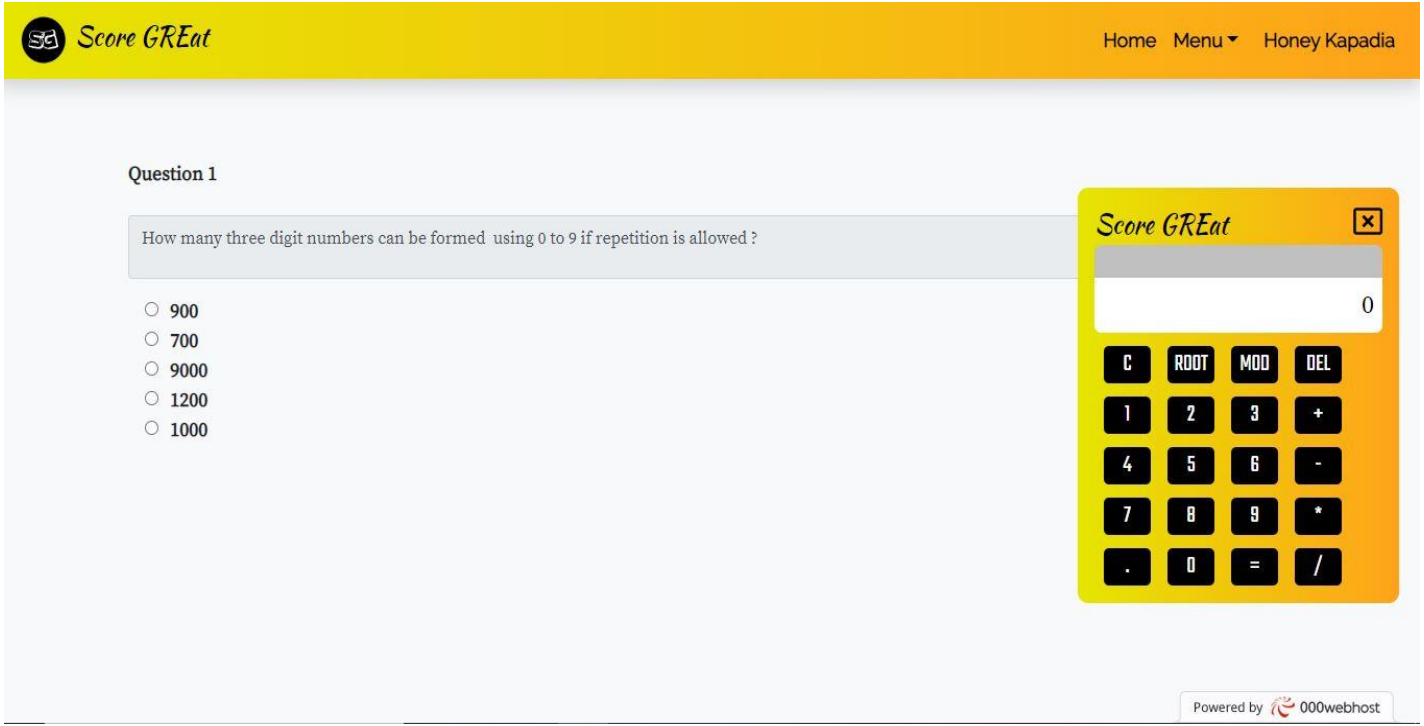



Fig.3(ii): General Practice

# IMPLEMENTATION(CONT…)

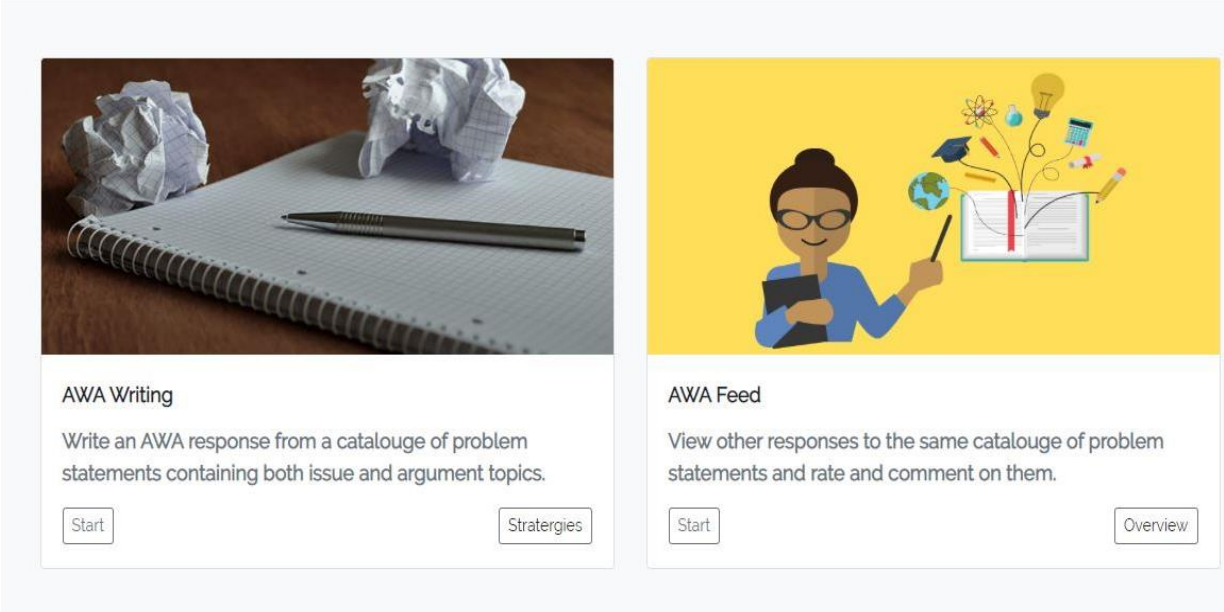



Fig.(4): AWA and AWA Review

# IMPLEMENTATION(CONT...)

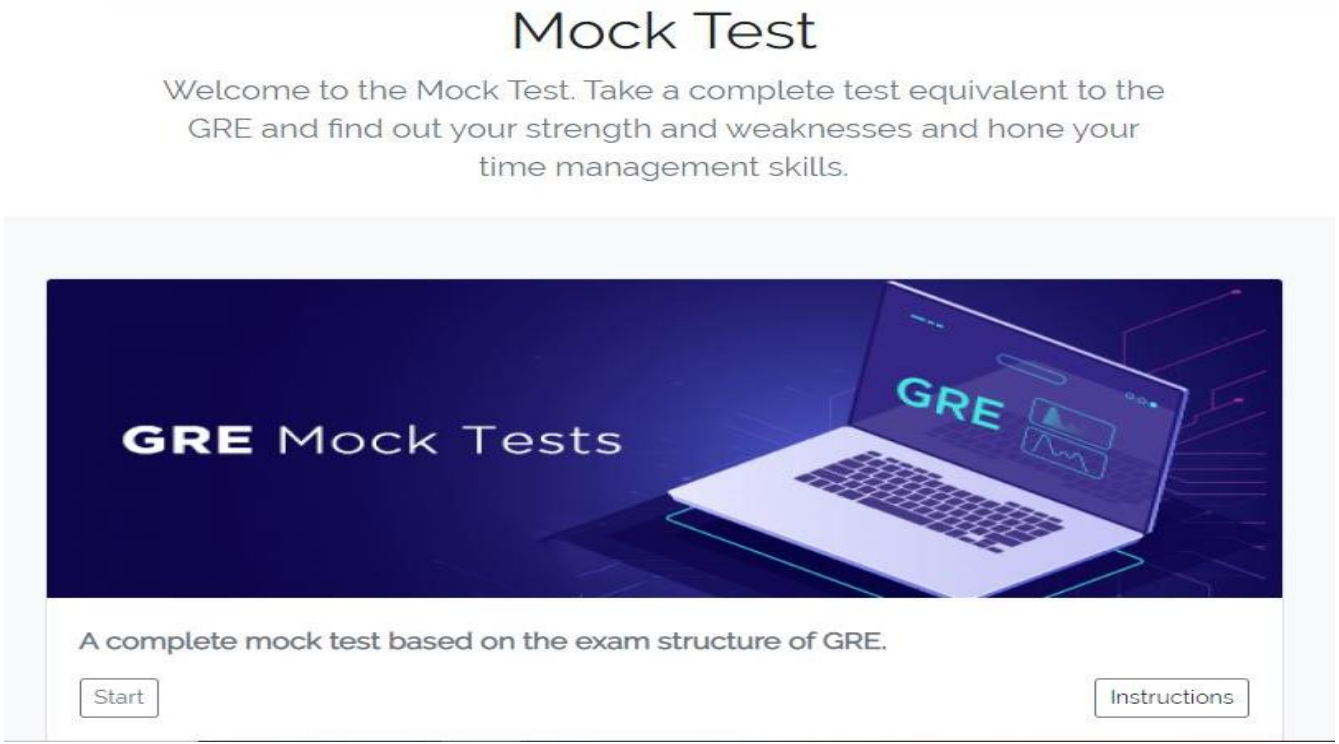



Fig.(5): Mock Test

# IMPLEMENTATION(CONT...)

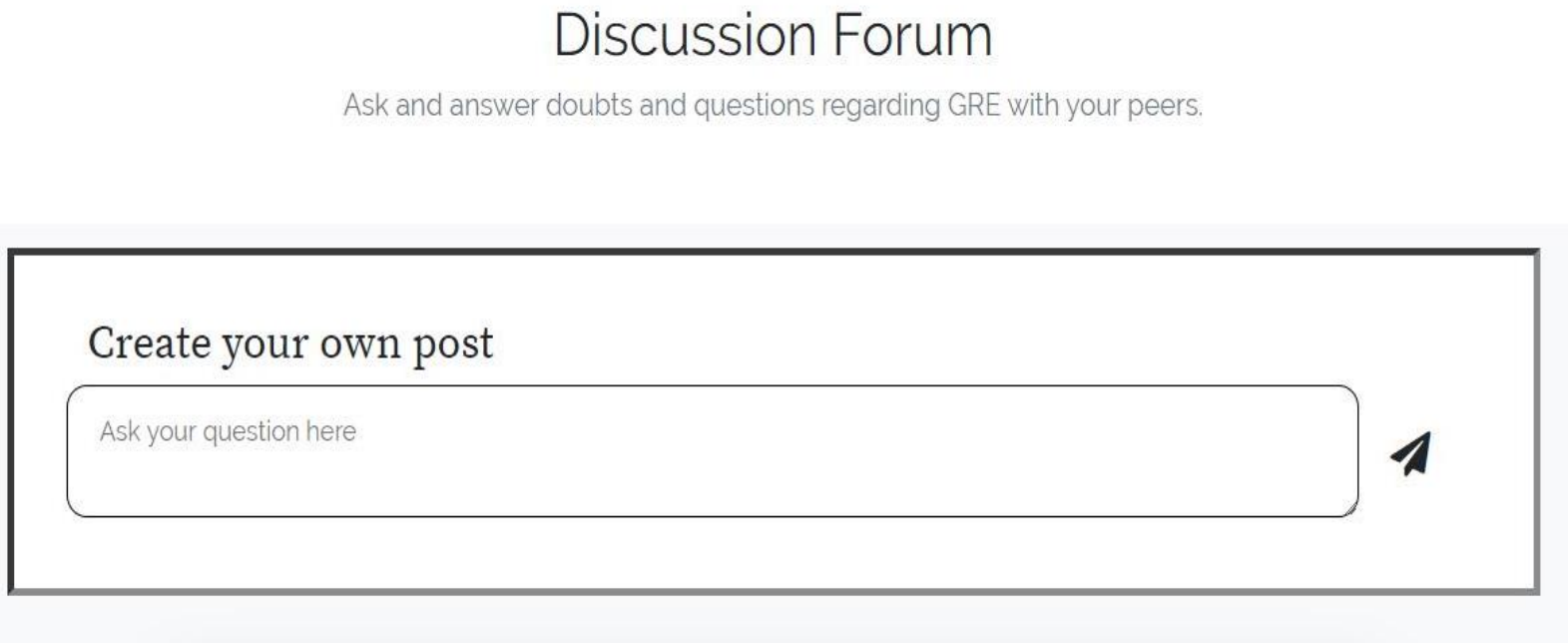



Fig.(6): Public Discussion Forum

# IMPLEMENTATION(CONT...)


Fig.(7): Multiplayer Game

# IMPLEMENTATION(CONT...)



Fig.(8): Saved Notes

# IMPLEMENTATION(CONT…)

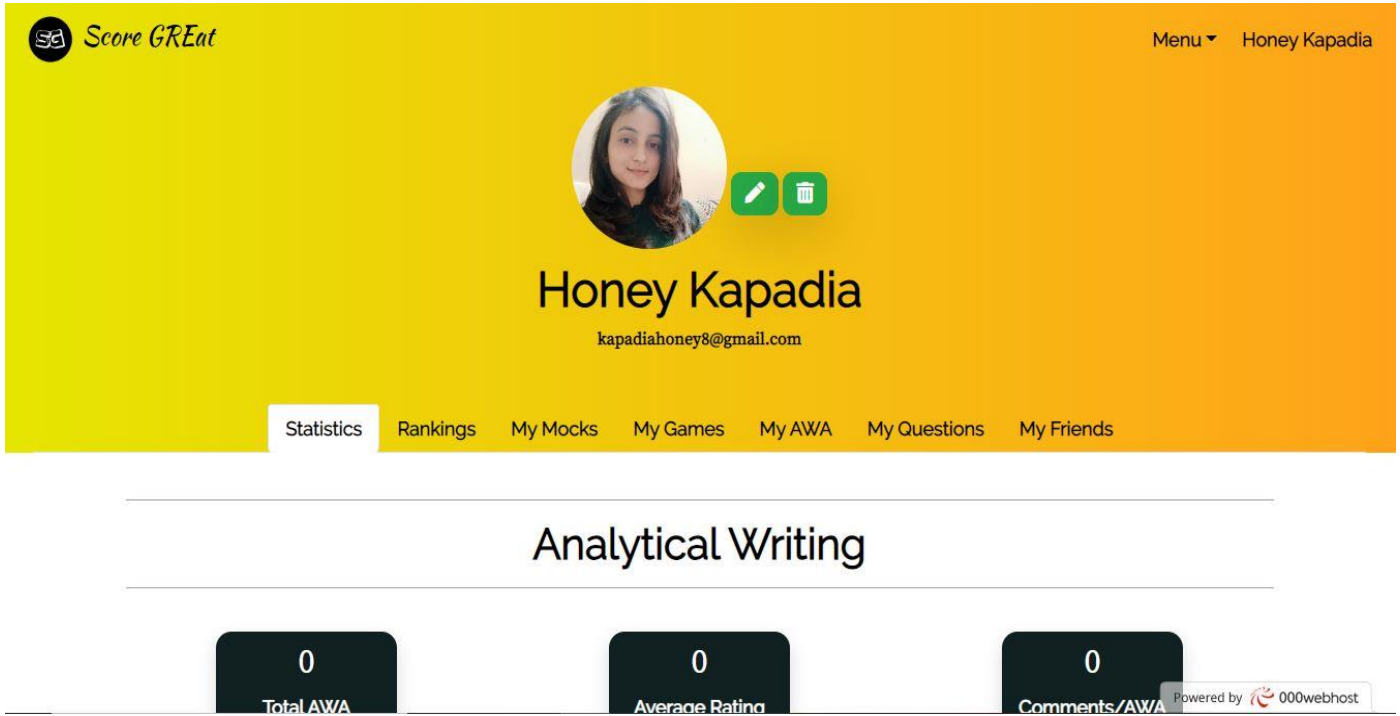



Fig.(8): Personal Profile

# CONCLUSION

- Adaptive learning systems have the potential to expand access to effective instruction and valuable test preparation resources.
- If applied efficiently and accurately, machine learning can help students identify their competence on core skills and motivate them to focus on their weak areas.

# References


- http://cs229.stanford.edu/proj2014/Julia%20Enthoven,An%20Adaptive%20System%20For%20Standardized%20Test%20Preparation.pdf
- https://www.analyticsvidhya.com/blog/2017/09/common-machine-learning-algorithms/

# THANK YOU…