# Requirements Document for QuizKnows

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# **1. Introduction**

Here at QuizKnows, we believe knowledge is what makes the world go around. QuizKnows, over the past decade, has climbed the ranks to become a nationally recognized major competitor in designing tools used for studying and learning. As the Internet continues to grow into the massive powerhouse that it is today, knowledge has become widely available to the masses at light speed. As technology keeps advancing, QuizKnows recognizes the potential of a web application that creates flashcards with unique and advantageous take on different quizzes and functions to create a revolutionary knowledge gaining experience. QuizKnows has financed and ensued in research to see if a study website that implements flashcards and unique functions would be beneficial and profitable in such an unstable economy due to the recent pandemic. The research that was conducted concluded that a web-based flashcard application would be profitable as ever due to increasing college attendance rates and need for specialized knowledge to survive in the cruel world. QuizKnows Corporation believes that a flashcard application with unique features and internet friendly interface will be a great investment, and the first version of “QuizKnows” begins under development by the profound “JDBC Warriors”.

Upon initial investigation, none of the ongoing staff know any programming languages and have no proficiency in creating a world-wide flashcard application that QuizKnows so greatly desires. QuizKnows looks at a local college, USC Upstate, to acquire four of its most proficient and brilliant students to undertake such a stupendous and vigorous task to create QuizKnows Version 1. The four new employees are Steven – Project Lead, Kristi – Assistant Team Lead. Aaron “Chance” – Project Team Member, Gillian – Project Team Member. The team has been assigned the codename “JDBC Warriors”. JDBC Warriors have been compensated well for their work and begin immediately on the development of QuizKnows. All information in this document as of September 10th, 2021, is completely accurate and is trademarked for no individual use.

This legally binding document includes the requirements and plans for JDBC Warriors to implement and create QuizKnows website in a timely and efficient manner. The following document is usable in the court of law and is equally equivalent to a contract between JDBC Warriors and QuizKnows multinational corporation.

This document has the following sections:

· Summary

· Application Context

· Functional Requirements

· Environmental Requirements

· Other Requirements

· Software Qualities

· Time Schedule

· Potential Risks

· Future Changes

· Glossary

· References

# **2. Summary**

QuizKnows intentions are to substantially expand its customer pool by implementing a revolutionary web-based flashcard application. QuizKnows plans to not only have flashcards, but be able to create useful options for the user to further enhance their learning environment. For example, QuizKnows plans to develop and apply sets of flashcards, matching and other learning options. QuizKnows analysts believe that having a flashcard application with such versatility and ranged options will not only create a massive influx of users and customers, but in return will also further QuizKnows’ other products and applications. With the JDBC Warriors and QuizKnows joint alliance, QuizKnows plans to revolutionize the design tools and studying and learning application with QuizKnows.com. QuizKnows knows that entering such a fluctuated and popular market comes with risks, thus they want QuizKnows Version 1 done as soon as possible to achieve a remarkable advance and gain before other tech firms come up with the same revolutionary idea.

QuizKnows Version 1 Main Features:

*Creating and storing flashcards*: Administrators or users with privileges can create a flash card with definition on the front and answer on the back, flashcards will be stored on QuizKnows database servers.

*Matching*: Singular or multiple flashcards with a definition will appear, as well as multiple random answers of other cards, if a user correctly chooses the definition, then it will be deemed correct, if not they will be marked wrong.

Timer: A test can have an option to be timed.

Search : Users can search for their and others study sets.

*Accounts*: Individuals will be able to make their own personal account.

*Admin Controls:* Admin will have a control panel to manage projects.

Logs: Will be able to view logs in order to conclude and analyze certain user actions and traffic.

*Sets*: Users will be able to make as well as view others sets, with additional functions such as exporting and converting into different file types.

*Error Handling*: Admins will be able to view errors for swift actions for correction.

*Fill in the Blank:* Users will be able to test their sets or others with fill in the blank.

*Study:*  Studiers will be able to view a set one card at a time, and then reveal the answer.

Risks:

*User-friendly*: Users must be able to initially know how to interact and navigate through QuizKnows functions.

*Database Capacity*- For initial launch one server shall be enough for testing and application development stage, but if implemented on a larger scale more hardware will be needed.

*Project Team Time Schedule:* Acquired individuals on the project team will have limited availability and schedules due to multiple classes and other ongoing projects.

*Cost:* Being a free web-based application, QuizKnows must have a massive influx of users and issue ads to acquire enough income to keep the project going. Project currently being funded by previous QuizKnows applications and products.

*Pandemic Related Uncertainty:* Covid-19 uncertain future may conflict meeting time to develop web-application.

*Constant Updates and Consistency Monitoring*: With programming languages and security going together, all servers and machines need to be updated and constantly tested for efficiency and security.

*Market Developments:* Flashcard and studying material in hotspot of business interest.

*Natural Catastrophes:* Natural events could cause outages and troubles to develop web applications on time.

*Family*: Here are QuizKnows we believe that all staff and personnel must have mandatory family time as we believe it produces higher standard work.

More risks are deemed common knowledge and not necessary to type in this document. If any questions pursue, please contact QuizKnows four qualified members and we will be able to electronically or call if deemed appropriate by staff to answer all questions, concerns, and problems. If prank calls or inappropriate communication between QuizKnows employees occur, those in guilt will be charged and executed and tried to the full extent of the law.

# **3. Application Context**

QuizKnows permits all users to access and fetch other study sets using the QuizKnows search bar. With such a limited and tight schedule, the JDBC Warriors might have to develop and learn new skills and shortcuts to be completed in a timely manner.

QuizKnows is a trademarked multinational corporation and all information in this document is strictly for QuizKnows personal use and no other company or person may copy, view, or repeat this information without explicit permission from QuizKnows. All information is to be considered top secret and offenders will be sued to the maximum penalty of fraud in the state of South Carolina, which is life in prison and up to a 1.6-billion-dollar penalty.

# **4. Functional Requirements**

**As of 12/3/2021 some of QuizKnows original functionality has been moved to a further implementation date, QuizKnows believe that they need to launch their product before December 4th, 2021 to have a competitive advantage over other flashcard applications. 95% of all original functions complete, rest of functionality shall be in patches.**

***ADMINISTRATOR FUNCTIONALITY***

***Administrator Panel***

4.1 QuizKnows Admins will have a panel to accesses admin commands

4.2 From the admins panel admins will be able to modify any cards or sets

4.3 From the admins panel admins will be able to delete any cards or sets

4.4 From the admins panel admins will be able to modify any folders

4.5 From the admins panel admins will be able to delete any folders

4.6 From the admin panel the admins will be able to modify and/or erase any user account that is not an admin account

***Updating Log Files***

4.7 Will have a log how many times a user has logged in.

4.8 Have a log when the user was last online.

4.9 Will tell you when the user account is created.

***USER FUNCTIONALITY***

***Creating an account***

4.11 There will be a button on our website to sign up for a new account

4.12 The account will be set up using an email or username of their choice along with a password. (We prompt for email, but username is allowed).

4.13 There will be a login button for users who have an existing account to login

***Creating New Sets***

4.14 Any logged in user will have a button on their set screen that will allow them to create a new set, which can be loaded with cards.

4.15 Each set will initially have 0 cards, but the user can add the card on the card tab.

4.16 There will be a button to add a new card to the set which will prompt the user to input question and answer.

4.17 You can only edit one set at a time.

4.18 There will be a submit button to submit the user's card into the set.

4.19 You should only be able to enter one card at a time into a set/

4.20 You should only be able to edit one card at a time (using the update tab).

***Saving a Set***

4.21 The set will be seeded one by one and will automatically save once you have created the set or created a card into the set.

4.22 Once a set is saved you will be able to view it from a page called MySets

***Editing a Set***

4.23 You can edit your set at any time using the update tab.

4.24 Future functionally will include renaming a set.

4.25 While in the edit screen you should be able to modify any given card in that set

4.26 While in the edit screen you should be able to only edit one set at a time

4.27 While in the edit screen you should be able to delete cards from a set

4.28 While in the edit screen you should be able to add cards to a set

4.29 While in the edit screen you should be able to leave the tab and come back with all results saved.

***Searching for a Set***

4.30 There will be a page that allows you to search for sets, using the username, cardID, or SubjectID.

4.31 The user should be allowed to search for a particular set in their library of sets.

4.32 The user should be allowed to search for other peoples sets

4.33 The user should be able to choose between searching for other sets and searching for their own sets.

***Upload Notes***

4.34 The user will be able to upload a word file to populate a set of flashcards (in future versions).

4.35 The user will be able to edit flashcards that were generated from a previously uploaded document file (in future versions).

***View Your Sets***

4.36 There will be a page called your sets to view sets you have made

4.37 From here there will be options to view your sets with a view button

4.38 From here you also will be able to edit your sets with an update button

***Export Sets***

4.39 The user will be able to save a set to a document file(in future versions).

***Help Section (In Future versions).***

4.40 The QuizKnows website should have a “Help” function that allows the users to get help on a variety of topics.

4.41 The help function should also include a short tutorial guide on how the QuizKnows website can be used.

***QUIZ FUNCTIONALITY***

***Select game screen***

4.42 There will be a page on the web application that allows you to pick from several different types of games; Study ,Matching, and Fill in the Blank.

4.43This screen will have clickable buttons to access all these different games.

***Study cards***

4.44 There will be a quiz-like function that allows the user to choose premade answers from premade flashcards in their sets through a series of different question and answer games.

4.45 There will be a button to move onto the next question

4.46 You will be able to iterate through all the questions into a set.

4.47 At the end you will know when you have run out of cards and can select a new set or reenter the setID to start over again.

***Matching***

4.48 There will be a question-and-answer game where the user will match a premade answer to a premade question in a created set of flashcards.

4.49 Matching can tell you what you got right and what you have got wrong upon initial testing.

***Multiple Choice (Future Versions).***

4.49 There will be a question-and-answer game where the user will pick an answer amongst four randomly selected premade answers for each premade question in a created set

***Fill in the Blank***

4.50 There will be a question given and you will need to write in an answer.

4.51 You will know if you know if you got the question right or wrong.

***Test (Future Versions).***

4.52 There will be a question-and-answer test game that combines the functionality of the other games that mimics the functionality of a school exam

***MISCELLANEOUS QUIZ FUNCTIONS***

***Timer (Future Versions).***

4.53 Each question-and-answer game will have a timer function that counts down from a specified duration

4.54 The timer function will be enabled and disabled by a button.

***Shuffle (First implementation built into matching to shuffle the word bank).***

4.55 Some learning techniques will implement a shuffle function.

***MISCELLANEOUS FUNCTIONALITY***

***User Interface***

4.56 The interface will have a search bar to search for sets

4.57 The interface will have a settings button specific to each user (Future Versions).

4.58 The interface will have a login button

4.59 The interface will have a logout button

4.60 The interface will have a menu button that will open a page that displays the user’s created sets.

4.61 The interface will have a set creation button in the MySets tab.

***Settings (Due to limited funding, QuizKnows was told to drop this subject).***

4.62 There will be an option to enable light and dark mode to change the ui elements

4.63 There will be an option to log out in the settings menu if you are logged in

4.64 There will be an option to login if you are not already in the settings menu

***Error Handling***

4.65 All error handling is left to the designers of QuizKnows and will be handled in house.

**5. Environmental Requirements**

QuizKnows is anticipated to be utilized by learners at every level, including but not limited to pre-college, undergraduate, graduate, trade school, and career development training. Therefore, QuizKnows will be a web-hosted service with downloading options for off-line studying. The suggested browser will be Chrome, however this product will be compatible with Safari, Firefox, Internet Explorer, and other relevant internet browsers.

Market research provided by “Researchers Anon, Inc” suggests that a webpage will provide the best compatibility across the most used browsers. This programming language will be maintained using Git.

**6. Other Requirements**

QuizKnows does not interface with other applications and is therefore a stand-alone application.

Cost to develop QuizKnows is capped at $267,354.98. To exceed this amount would cause the project to become unprofitable.

JDBC Warriors must maintain careful documentation concerning decisions and changes made in this document. JDBC Warriors must also deliver an in-depth application manual so that any database management successors may properly maintain QuizKnows.

**7. Software Qualities**

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| * *Functionality* | Since each learner needs a variety of tools to learn with, all functions need to be operational for every learning set created by the user. |
| * *Reliability* | Learners will be reliant on this tool for improving their learning outcomes, Quizknows must be reliable for them. The system needs to always be operational and accessible. |
| * *Usability* | Users are anticipated to be of varying computer skill levels and ages, thus Quizknows must be easy to use for all users. |
| * *Efficiency* | All Quizknows features need to be implemented in the most efficient way possible. |
| * *Maintainability* | Since Quizknows is expected to be utilized by many types of users over time, the database will need to be maintained routinely with ease and without disruption to the user. |
| * *Portability* | QuizKnows will need to be portable to all available browsers and work flawlessly within the major or most popular browsers. |

# **8. Time Schedule**

QuizKnows has researched how long this project should take and issue a flexible time management system. The following system goes like this:

1. Design has to be completed by the first quarter of the start date.
2. Implementation and general testing must be completed by the third quarter of the original start date.
3. Overall final testing and completion must be completed by the fourth and final quarter of the original start date.

# **9. Other Potential Risks**

***Webpage is not user friendly:*** With an advanced engineers team JDBC warriors developing this application we need to ensure less tech savvy users will be able to navigate the web page.

***Broken links:*** A very difficult task to continuously and regularly check websites for broken links as there are so many being used for every user.

***Complex coding***: New skills must be learned in time and rational thinking must be applied in order to complete such a difficult application on a tight schedule.

***Multiple Projects in pursuit by team***: JDBC warriors are so great that they have many other projects in multiple classes, which could hinder the quality of their coding and overall design.

# **10. Future Changes to Application**

***Ads:*** In order to make money and spread knowledge Quiz Knows needs to become popular so advertising companies will partner with them.

***FriendList:*** In QuizKnows version 2 a friend request system will be employed, which will allow users to compete in games against another and view another’s set through the friend list instead of searching for their name.

***Versus Mode:*** With the addition of a friend list there will be a new versus mode where users fight to answer a question that pops up first with the right answer. If you answer right and the fastest you get +2 , if you get it right you get + 1, if you get it wrong you get -1.

# **11. Glossary**

***JDBC Warriors***- Team assigned to complete QuizKnows. Steven – Project Lead, Kristi – Assistant Team Lead. Aaron “Chance” – Project Team Member, Gillian – Project Team Member.

**H*TML/CSS*** - HTML (Hypertext Markup Language) and CSS (Cascading Style Sheets) are planned to be used to create QuizKnows.

User- the person who will be QuizKnows.

Feel free to delete/ change anything will not hurt my feelings LMAO

***QuizKnows version 1*** - first version of QuizKnows website planned for JDBC warriors to complete.

***Set*** - definition matched with their answer.

***FriendList***: Users can be able to see their friend’s activity, sets, and challenge them within QuizKnows.

***Card***- Interchangeable term for a definition/ answer. .

***Link***: A character of string that creates a link and directs the user to another place.

# **12. References**

**·**  [**http://www.dictionary.com**](http://www.dictionary.com/)