

Survey on KIOSK System

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ABSTRACT

KIOSK is one of the best ways to get the information about any organization and location. KIOSK system can be used at any public places like industry, college or any organization etc. Especially this KIOSK system is designed to help the visitor to get the information about that place and the related information about it. In this system we are using the Mirror module by using that module the whole screen is shared on users mobile.

Keywords : KIOSK, Push, Mirror

I. INTRODUCTION

The KIOSK is available for any organization to provide information related to that organization. The KIOSK system has some limitations due to that limitations user is not able to use it efficiently. The available KIOSK system is not able to handle huge crowd at a time. So the multiple user can't use it at a time, user has to wait until and unless it gets free. One more problem with this KIOSK is user needs to remember the contents of the selected modules or users have to take screenshot of it. If the content is simple then user can remember it but if the content contains some complex map of any particular location then in that case it will be tricky to remember. All these disadvantages of the existing system are eliminated by the proposed system.

II. LITERATURE SURVEY

A. *Kimono: KIOSK- Mobile Phone Knowledge Sharing System: -*

This paper gives information that the KIOSK is important aspect to humans. New visitor can access information about that location. KIOSK system can benefit to visitor by its user friendly interface. The information related to a specific location can be retrieved from KIOSK system.

B. *Implementation of information KIOSK for hospital:*

This paper gives the basic information about the KIOSK it is not just a computer with touch screen. It is an integration of mechanical, computer hardware & software

C. *Design of Touch Screen Based- KIOSK Local Area Tour Guide system:-*

This paper gives information that the KIOSK is important aspect to humans. New visitor can access information about that location. KIOSK system can benefit to visitor by its user friendly interface. The information related to a specific location can be retrieved from KIOSK system.

D. *Vision for Smart KIOSK:-*

This paper gives visions of smart KIOSK such as multiple people can interact with KIOSK system, user must get quick and expected response. It also uses different software architecture pattern like MVC are used for implementation of UI.

E. *System for Visitor Pass:-*

This paper gives the some security feature related to KIOSK system are:

- i) KIOSK must disable all special keys and keystroke sequences such as control, alter and delete sticky keys if it is using virtual keyboard.
- ii) If it is internet based KIOSK then standard browser menu should be disabled. Also important to prevent user from accessing URL's not applicable to function of KIOSK.
- iii) One of the important features of KIOSK system is ability to clear the cache, user history and data from browser to avoid misuse.

F. AIML Based Voice Enabled Artificial Intelligent Chatterbot:-

- i) AIML stands for Artificial Intelligence Mark-up Language.
- ii) Using NLP user can interact with the system even if Don't aware about read write.
- iii) Return response in the form of text or in the form of speech.
- iv) AIML is flavour of xml.
- v) AIML is used in parsing and declaration of different kind of sentences.

III. PROPOSED SYSTEM ARCHITECTURE

The Figure 1 shows the proposed system architecture of KIOSK system.

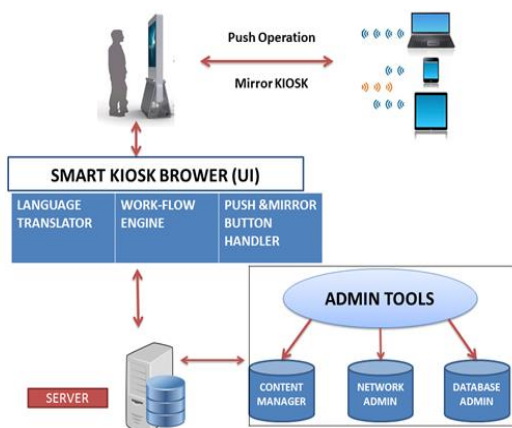


Figure 1: Proposed System Architecture

The KIOSK is based on client server model. Server side contains various administrative tools to handle the KIOSK system properly. This admin tools consists of different types of admin who will be responsible for handling the whole KIOSK system. Different types of admin are-

- i) Content manager.
- ii) Network admin.
- iii) Database admin.

Content manager is responsible for managing the contents of the system as well as changes in GUI of the KIOSK software. The database administrator is responsible for managing the various activities such as backup, update etc. Network administrator is responsible for maintaining the connection between client and server. It must be able to provide the secure connection between client and server; it must be able to handle the network traffic.

Server is responsible for the backend process of which user may not be aware. The database server has all information stored on it. The information on the server side can be static and dynamic as well. The user can interact with the system using touch screen based web browser. The web browser is consists of language selection, workflow engine, push and mirror button handler. Using the language selector the appropriate language will be selected by the user. Workflow engine is interconnected part of the software. Push module is used to transfer the content in image or in Pdf form. Mirror is use to share the screen of the system.

III. METHODS AND MATERIAL

Methodology

The overview and abstract view of the proposed system is as shown in the below drawn Figure 2 and Figure 3.

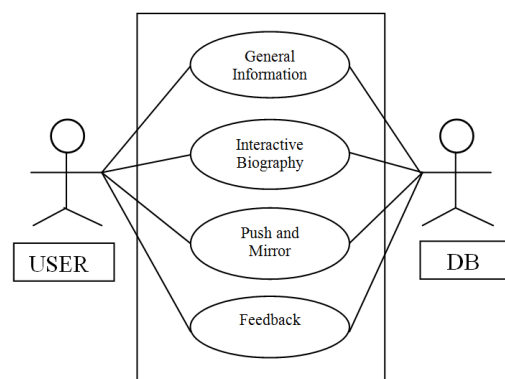


Figure 2: Use-case Diagram

The use-case diagram gives overview of our system. Every user is actor whereas database is supporting actor. There are four use cases included in it:

i) General Information

It provides general information about an organization for e.g. Information about Shirdi (local guide).

ii) Interactive Biography

It deals with answering a particular query regarding biography for e.g. queries on Saibaba Biography in intelligent way.

iii) Push and Mirror

It deals with handling multiple users at the same time.

iv) Feedback

User can give feedback about the system in feedback module.

ii) Control flow Diagram

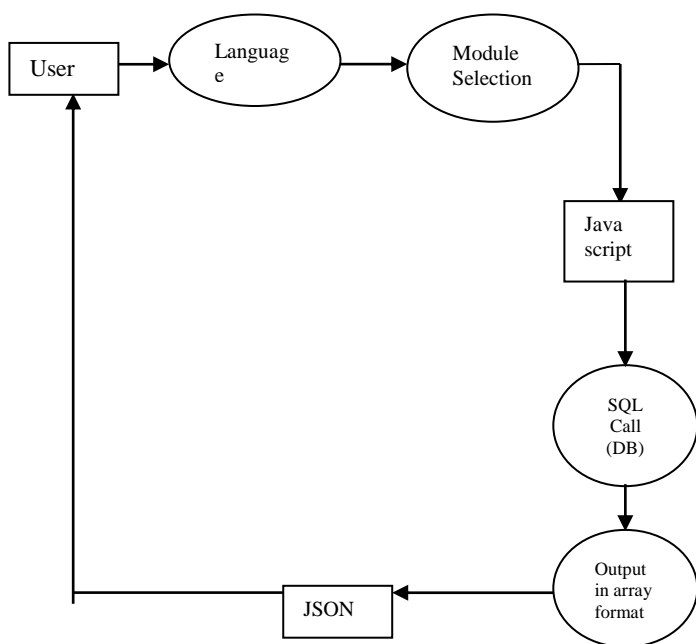


Figure 3: Control flow Diagram

The Figure 3 shows the control flow diagram of the system. In this system, first user will select the appropriate language. After selection of the language, control is transferred to the selection of module. The module of the system is categorized into four types-

- i) General information
- ii) Interactive Biography
- iii) Push and mirror
- iv) Feedback

Depending upon the selection of the module, query will be fired. As at the client side we have java script which contains various tags, then depending upon users query, the appropriate tag is get selected and that tag is considered as search query. Thus that tag will call to the database to search the information related to the query. Once the information is found, it is stored in JSON array. Hence that array is sent to user as retrieved information and it will display on users devices as a response of the query and not as an independent document.

iii) Algorithm used for information retrieval

Consider the set of number of the requirements $R = \{R_1, R_2, R_3, \dots, R_n\}$. In this algorithm we can select the requirement (2^{n-1}) .

Steps required in solving the problem:

1. Consider the string str having total length 'n'.
2. Initialize the string to zero.
3. In the total requirement set 'R' any requirements is true then make that particular bit to one.

Using this method we can get total (2^{n-1}) different queries.

Algorithm A:

Formation of the string depending on the user's requirement.

StringFormBinStr ()

1. Begin
2. Create String having length 'n'
3. For $i \leftarrow 1$ to n
 $str[i] \leftarrow n$
4. for $i \leftarrow 1$ to n
 If ith requirement is get selected
 $str[i] \leftarrow 1$
5. Return str
6. Stop

Algorithm B:

Void Form Query (str P)

1. Begin
2. For $i \leftarrow 1$ to n
 If $P[i] = 1$
 Fetch i^{th} view from the database save I in an integer array named R.
 Cnt++

3. For $i \leftarrow 1$ to cnt

Perform intersection operation on R[i] view and store the information in temporary variable.

4. Display the information present in the temporary variable.

5. Stop

IV. CONCLUSION

The String will be generated as an output of the Algorithm A and this generated string will be given as an input to the Algorithm B. The Algorithm B will detect the requirement and retrieve the information of it and display on the user's device.

This paper gives the basic survey related to the smart KIOSK system. It also gives the brief information about the architecture of the system. The general idea about the KIOSK system will help the user for retrieving the information. It will provide facility to share the content on user's device also it has ability to handle multiple users at the same time.

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