



Proposal
For
Second Year Project
Bachelor of Science in Information Technology
Even Attendance Application using QR code

Submitted by
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Read carefully before filling the form.

1. Please do not alter the layout of the application form. Information must be filled in the spaces provided, under set format.
2. Guidance notes in various fields should not be deleted.
3. Required information should be duly filled in the specified fields.
4. Required heads/fields which are not relevant to the project should be marked **N/A** (Not Applicable) or left blank and should not be deleted.

Guidelines and Forms

Submission Procedure

Duly filled proposal forms completed in all respects should be submitted in form of soft copy and a hard copy to project guide and project coordinator. On receipt of the applications the proposals will be evaluated by reviewer panel and proposal would then be defended by student groups. The project group may need to revise the proposal in light of the evaluator's recommendations.

For further information, please contact:

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Note: To update the table of contents, right click in the table and select '*update field*' and then select 'Update Entire Table'.

Application for Final Year Project

1. Project Identification

A. Reference Number:	
(for office use only)	
B. Project Title:	
C. Project Internal Guide:	
Name:	
Designation:	
Organization:	
Mobile # :	Tel. # :
Email:	
C1. Project External Guide:	
Name: NA	
Designation:	
Organization:	
Mobile # :	Tel. # :
Email:	
C2. Student Group Lead:	

Name:	
Roll No:	
Department:	
Mobile # :	Tel. # :
Email:	

D. Organizations Involved in the Project:

(Please identify all affiliated organizations collaborating in the project, and describe their role/contribution to the project.)

D1. Industrial Organizations:

#	Organization Name	Role / Contribution
	NA	

D2. Academic Organizations:

#	Organization Name	Role / Contribution

D3. Funding Organizations:

#	Organization Name	Role / Contribution
	NA	

E. Key Words:

(Please provide a maximum of 5 key words that describe the project. The key words will be incorporated in our database.)

Application

Easy and efficient attendance system

Time saving

Promoting digital exposure

Saves resources.

F. Research and Development Theme:

The event attendance app QR code provides a platform whereby one can show himself that he had been attend event through scanning QR code. Using this software, both event organizer and participant can capture the real time attendance log of itself. The genuine motivation behind the application is that, with the help of this application, it make less work for event organizer to see who had attend their event.

G. Project Status:

(Please mark ☒)

☒ New Modification to previous Project

Extension of existing project

H. Project Duration:

Expected Starting Date: 17/02/2021

Planned Duration in
months: 4 months

2. Scope, Introduction and Background of the Project

A. Scope of the Project: This system focuses on all people that join any event with the use QR code. The system involved web based system to generate the QR code and android application to scan QR code by the user.

This application is divided into two parts which is user(Participants) and admin(event handler/organization). The Event Attendance using QR codes only have a user scope only.

1. User(Participants)

- Able to scan the QR code.
- Able to fill in the profile form.
- Able to delete their profile
- Able to update their profile

2. Admin(event handler)

- Able to log in as administrator.
- Able to manage an event.
- Able to manage participant.
- Able to update the event status/information.
- Able to view the QR code.
- Able to download their QR code.
- • Able to generate report.

B. Introduction (Project Background and Literature Review, Current State of the Art):

Several of event, programs, activities and classes are organized today's such as educational programs, curricular event and mathematical classes. Therefore, the presence of a program is crucial to ensure that the program can run smoothly. The absence of a participant will cause a failure for a program. However, too many participants will also make it difficult for the organizers to highlight the attendance of the participants. Participants usually need to register attendance at the registration counter one by one. This will make it difficult for participants and the organizers themselves.

Today, mobile phones are a great choice for the world community because mobile phones make it easier for people to communicate and live their lives. Therefore, the advantages of mobile phones should be utilized as best as possible in order to maximize their use in our lives. Problems recording attendance for a program can be simplified with the use of mobile phones. To overcome the problem, Event Attendance application using QR code is proposed which serves to record attendance. This system focuses on recording attendance of participating people for events using QR code. This system is a mobile application system. Events usually require pen and paper to record participants. So, this system will use the QR code technique to ensure that attendee attendance can be easily recorded. Organizer will create an event, and then the organizer will sign the event in the web based system. The system will generate the QR code that contains event information. During the event, QR code will be seen on the screen LCD or printed and placed on the wall. User will open the Event Attendance application using QR code and log in. The application will verify the login and get user information. Lastly, user will scan QR code that the organizer generates and the application will record the attendance based on user information and event information extracted from QR code. Then reports of participants attending the event are produced in the

form of tables.

Literature Review:

There are existing systems that uses QR codes that can be found nowadays. The existing systems that have been chosen have their advantages and disadvantages. The existing system was compared by study their system article and it is from local and other countries.

There are four articles that I had refered. The first one is Smart Mobile Attendance System for Employees Using QR Scanner by B.Dinesh Kumar¹ and S.Kareemulla². Year the article created is 2017 and the objective of the system is to use the smartphones for updating the attendance on time. The advantages of this system are the uses of fingerprint and voice verification for authentication will avoid proxy of attendance. The disadvantages are not all device or smartphones can support fingerprint features.

Second article is Attendance Checking System Using Quick Response Code for Students at the University of Sulaimaniyah in year 2014 by Miran Hikmat Mohammed Baban. The objective of the system is to displays the student's absentee for each lecture and course and calculate the absentee rate. The advantages are the calculation of the absentee rate is easier and more accurate because all calculations are performed by computer rather than manually. The disadvantage is the system cannot store attendance data and teacher need to make excel file of student absentee attendance from manual attendance sheet and upload every week to the system administrator to compute the data.

Third article is Smart Attendance System Applying QR Code in 2017 by Md Rizal Md Hendry, Mohd Noah A. Rahman and Afzaal. H. Seyal. The objective of the system is to make an attendant's report using automated student attendance system modeled and

developed for use at a vocational school. The advantages of the system are the system produced an attendance report. The disadvantages for this system is this system cannot ensure reliability of participate that sign in and scan the QR code because there is no authentication features in this system.

The last article is Students Attendance System Using QR Code in 2014 by Fadi Masalha and Nael Hirzallah. The objective of this system is to verify the identity of the student to delete fake registration and to scan the code in order to confirm their attendance. The advantages of this system are the system have good authentication features which is the system requires the student to snap the photo of student that scan qr code and will detect the location via GPS. The disadvantages of this system are the registration will take long time than other system because there is two authentication processes which is snap photo and location detection.

C. Challenges:

(Please describe the challenges, specific to this research topic, currently being faced internationally.)

1. Requirement Gathering: Large amount of data to be gathered by myself.
2. I am not familiar with android studio and app development
3. Exploring QR code will be challenging

D. Motivation and Need:

(Please describe the motivation and need for this work.)

Today, mobile phones are a great choice for the world community because mobile phones make it easier for people to communicate and live their lives. Therefore, the advantages of mobile phones should be utilized as best as possible in order to maximize their use in our lives. Problems recording attendance for a program can be simplified with the use of mobile phones. To overcome the problem, Event Attendance application using QR code is proposed which serves to record attendance. This system focuses on recording attendance of participating people for events using QR code.

3. Aim and Objectives of the Project

(Please write the actual aim of your project. Also, describe the measurable objectives of the project and define the expected results. Use results-oriented wording with verbs such as 'to develop..', 'to implement..', 'to research..', 'to determine..', 'to identify..' The objectives should not be statements and should not include explanations and benefits. The objective should actually specify in simple words what the project team intends to achieve (something concrete and measurable/ deliverable). Fill only those objectives that are applicable to the proposed project.)

AIM: To develop an android application to keep record of people attending the event using QR code.

OBJECTIVES :

- To design a QR Code Event attendance mobile application that is easy to use and efficient in terms of recording attendance
- To develop mobile applications that can generate and scan QR code in order to make it easy for users to sign up for an event.
- To test the efficiency and functionality of proposed system that meets the requirements.

4. Methodology

A. Development / Research / Test Methodology:

(Please describe the technical details and justification of your development and research plan and test plan and testing strategies. Identify specialized equipment, facilities and infrastructure which are required for the project and their utilization plan. The block diagrams, system flow charts, high level algorithm details etc. have to be provided in this section. Also, describe the overall methodology to be used for the particular research topic)

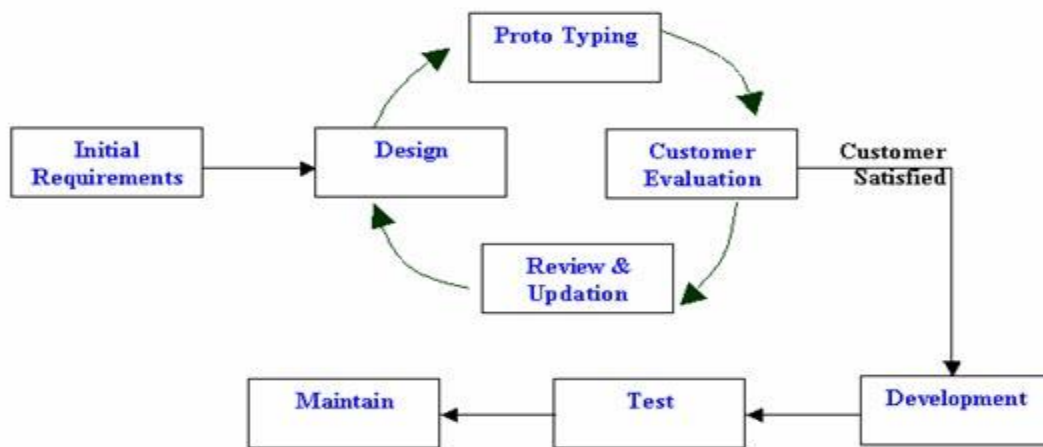
The SDLC model we are going to use to Develop Attendance App is Prototype Model

The prototyping model is one of the most popularly used SDLC model.

Prototyping Model is a software development model in which prototype is built, tested, and reworked until an acceptable prototype is achieved. It also creates base to produce the final system or software. It works best in scenarios where the project's requirements are not known in detail. It is an iterative, trial and error method which takes place between developer and client. In this model, working programs are quickly produced

Our motive to use prototype model is:

- It is easy to detect errors.
- Users are actively involved in the development.
- Missing functionality can be identified easily.
- Reduced time and cost.



Proto Type Model

B. Project Team:

<i>Title / Position</i>	<i>Number</i>
Project Internal Guide	
Project External Guide	

Student Team Members	
Others (please specify)	
Add more rows if required	

C. Project Activities:

(Please list and describe the main project activities, including those associated with the transfer of the research results to customers/beneficiaries. The timing and duration of research activities are to be shown in the Gantt chart in Section 8.)

Proposal writing: Before we proceed with anything in project activity we have to first come up with a project topic and then write a project proposal. A project proposal is a document which consists of the plan of activities aimed to solve a specific problem.

Problem statement: A problem statement is a brief depiction of an issue to be tended to or a condition to be developed. It distinguishes the hole between the current (issue) state and wanted goal of a product (app/webpage).

Installation of Software and tools: Android Studio, jdk and xampp

Resource gathering: Video tutorials and online reference

Design Phase: Includes designing user interface, database design and understanding the functionalities, flow of information, identifying, keeping the design concepts in mind.

Development of the product: The development of application will begin with coding using java.

Testing the product: The product will go through unit test to ensure that every unit works appropriately and will likewise do unit testing to ensure that it produce an ideal capacity in the wake of joining all the units.

Final Documentation: In the wake of finishing all the stages we will set up the documentation of the project, project report and lastly final project presentation will wrap up with the project.

D. Key Milestones and Deliverables:

(Please list and describe the principal milestones and associated deliverables of the project. A key milestone is reached when a significant phase in the project is concluded, e.g. selection and simulation of algorithms, completion of architectural design and design documents, commissioning of equipment, completion of test, etc.) The timing of milestones is also to be shown in the Gantt chart in Section 8.

No.	Elapsed time from start (in months) of the project	Milestone	Deliverables
	27/02/2021-14/03/2021	Problem statement, title selection, literature.	Project proposal
	15/03/2021-29/03/2021	Requirement gathering, analysis and design.	UI diagram, SRS model of system and ER model and relation diagram.
	30/03/2021	Software installation	Setup environment for development.
	01/04/2021-30/04/2021	coding	Source code and functional features implementation.
	01/05/2021-12/05/2021	Complete development	Complete application
	13/05/2021-18/05/2021	Testing	Test case
	19/05/2021-	Final documentation and final	All the documents are combined

	28/05/2021	review.	together and kept ready
(Please add more rows if required.)			

5. Benefits of the Project (Expected output/outcomes):

The outcome of this project would be fully functional Attendance App with following features:

- Easy to access and user-friendly
- Convenient
- Won't require many resources

EXPECTED RESULT

- A QR code application created meets the user requirement
- An application that user friendly and easily to use
- A QR code scanner that can scan the codes quickly and accurately
- System that generates QR codes

6. Risk Analysis/Feasibility**A. Risks of the Project:**

(Please describe the factors that may cause delays in, or prevent implementation of, the project as proposed above; estimate the degree of risk.)

(Please mark ☒ where applicable)

Low

Medium

High

Technical risk



Timing risk



Budget risk

**A1. Comments(Describe the risk):**

(Approval of Project Proposal by the Competent Authority (Department Chairman) and Project Review Team is mandatory before the start of project execution.)

Sl #	Name	Signature
------	------	-----------

Project Coordinator

Date: _____ Signature: _____

& stamp:

8. Reviewers Panel Comments

10. Project Schedule / Milestone Chart /Work plan

(Project schedule using MS-Project (or similar tools) with all tasks, deliverables, milestones, clearly indicated are preferred. Task should be measured in terms of hours)

13. Report Writing Guidelines

(Project report will be written under the specified guidelines.)

Bibliography

- Kumar, B. D., & Kareemulla, S. (2017). Smart Mobile Attendance System for Employees Using QR Scanner. Asian Journal of Applied Science and Technology (AJAST), 1(5), 35- 39.
- Baban, M. H. M. (2014). Attendance checking system using quick response code for students at the university of sulaimaniyah. Journal of mathematics and computer science, 10(2014), 189-198.
- Hendry, M. R. M., Rahman, M. N. A., & Seyal, A. H. (2017). Smart attendance system applying QR code. In 12th International Conference on Latest Trends in Engineering and Technology (ICLTET'2017) May (pp. 22-24).
- Masalha, F., & Hirzallah, N. (2014). A students attendance system using QR code. International Journal of Advanced Computer Science and Applications, 5(3), 75-79.
- Ayop, Z., Lin, C. Y., Anawar, S., Hamid, E., & Azhar, M. S. (2018). Location-aware Event Attendance System using QR Code and GPS Technology. INTERNATIONAL JOURNAL OF ADVANCED COMPUTER SCIENCE AND APPLICATIONS, 9(9), 466- 473