

'SITP Test Manager' Add-On for Google Form

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Abstract - An add-on is a user defined software extension that adds extra features to a program [1]. Extensions can be employed for the efficient working of any application or browser. The 'SITP Test Manager Add-on' project is proposed for this purpose. This system utilizes test papers and applies various features to the Google Form. Add-ons allow the developers to modify and extend the functionality of the web pages. It is created using standard Web based technologies like PHP, HTML, and CSS [1]. To add more features to Google forms for test management, we are going to create new add-on to it for college management which contains Timer, Scheduler, Auto-submit, Email notifications, keeping the records of every student and logo of Institute to the test paper.

Key Words: add-on, Google form, website, Examination system, records storing, test paper processing

1. INTRODUCTION

The add-ons for the Google forms are nothing but the websites which are used to add the extra properties and functionalities to the test papers. An add-on is used to establish connectivity to the third party and it helps users to develop surveys. The add-on extend certain functions within the program interface as well as add new items to the program, or give the program extra capabilities [2]. The 'SITP Test Manager add-on' is the extension for the Google form. It consist of different functionalities which are used to the Google Form more efficient and useful for Examination purpose.

The data that we are going to collect is Google forms, and the next step is to upload the test paper to the 'SITP Test Manager add-on'. This add-on will process the test paper and produce a new link. Timer, Scheduler, automatic submission, email notifications and displaying logo are the different modules added to this add-on. This website will keep the record of each student for each subject and also keeps the faculty record for effective examination system. The database is connected for this purpose.

There are two main modules in this system which are admin panel (for exam head) and teacher's section. The admin will keep the records of the teachers as well as test paper conducted by the teachers. Admin has the access for teacher's and student's database. The teacher will take the exam through this add-on. The teacher should provide the response sheet to the add-on for email notifications. The teacher has the access over the student database. It is easy

for teacher to keep record of student's marks through this system.

1.1 Web server

The web server is a computer that accepts the requests for the pages via the network protocols like HTTP. It stores the web server software along with the files associated with it. For example, HTML documents, Javascript file, relevant images, CSS stylesheets, etc. The web server connects to internet and provides the service for interchanging the physical data with other devices connected to that web service. The web server acts as a server in client server architecture model by implementing various HTTP protocols and other extensions and features. Here, we have used the localhost for website hosting and data exchange [5].

1.2 Physical data storage

A database is software which is used for physical data storage. The MySQL is a database system which is most commonly used database for web servers. It has high speed, flexibility and more reliability. The phpMyAdmin is a free tool which is the most recommended application of MySQL database management system. For storing the website data, we have used this database. We can easily create, update, delete, drop and insert data in this database.

2. Project Overview

This project is an extension for the Google form. This add-on aims to manage the online examination system. The objective of this project is to manage the online examination system of the Institute and making the Google form more efficient.

2.1 Literature Review

Google Forms are used for the examination and surveys. It is a cloud-based questionnaire and survey solution with real-time collaboration and powerful tools to customize form questions [3]. Nowadays it is majorly used for the examination in colleges and schools. But there are no restrictions for the students in examination. So to overcome this problem, various add-ons are available on the Google Workspace [4].

The 'Hypatia Create' has developed the math equation solver. This is used for quick math solving. 'Zac.io' has developed the snip add-on which is used to crop the scanned

documents. 'Form Publisher' has developed the document merge solution.

2.2 System Study

The 'SITP Test Manager Add-on' project is proposed for the examination purpose. This is a proposed system which allows you to connect it with the Google form. It also works for automatically generated time limit, supports of scheduling a test paper, adding the logo to the header of a form, automatic submission of the test after the specified time limit and also sends the email for the student with their obtained marks.

This website has two phases – one is for admin (i.e. exam head) and the other one is for subject teachers. The admin will keep the records of all the exams and students responses. The admin will also be able to see the teacher details with their exam data. The subject teacher will be able to create a new test paper link and distributing the marks. The teacher may send the email notification for the student via uploading the csv file on the website.

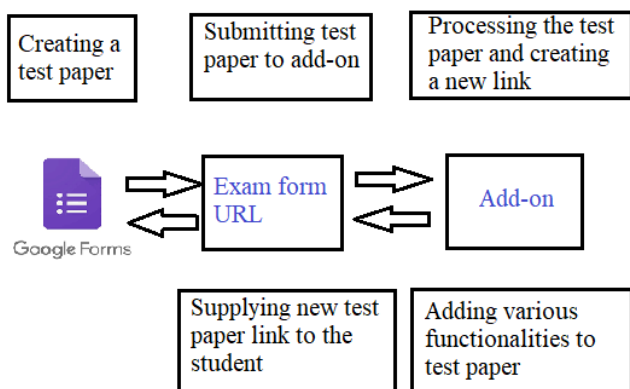


Fig. Architecture diagram

2.3 Proposed Methodology

The 'SITP Test Manager add-on' consist of different functionalities which are used for the Google Form [2]. The data that we have collected are Google forms, and the next step is to add the form URL to the 'SITP Test Manager add-on'. Then this system produces a new link which will contain the test paper with proposed functionality [2].

Timer, Scheduler, automatic submission and displaying logo are the different modules added to this project. The students will get the emails after uploading the csv file of responses to the website by the teacher. The timer will set the time limit for the test paper [4]. The Automatic Submission (Auto-submit) feature is used to obtain a student's saved work in an untimed assessment when the student failed to submit it. The user may enable Auto-submit function to force the submission of exam that remain in progress after the exam's

latest submission date has passed out. By sending the email to the student, it is easy for teacher to release the marks. The database connected to this website will store the class-wise subject details and marks of each student.

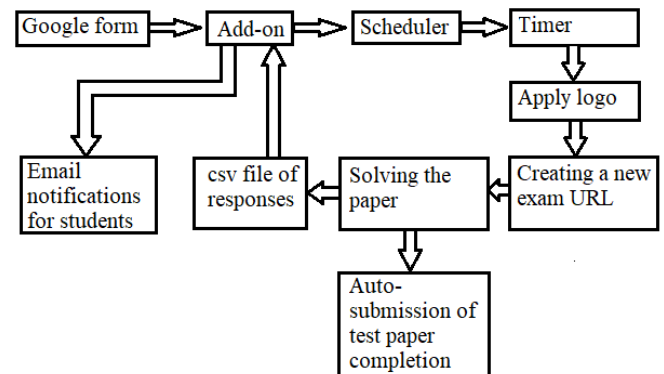


Fig - Sequence Diagram

Step 1: Creating a Google Form

The first step is to create a test paper using Google form.

Step 2: Call Exam form URL

It connects the form with the add-on. By then, one can access the features provided by the add-on.

Step 3: Scheduling the test paper

Once the form is created, teacher can schedule the test paper to the specified date and time. The link will be created after preparing the exam sheet. The link will get started at the specified date and time. After the specified date and time, the will get closed automatically after the specified time.

Step 4: Setting time to paper

While developing a form, one can set the timer for solving the form. When user starts the exam paper, the timer get started. The link will be valid till the time is remained. Timer is a special type of clock used for measuring specific time intervals. The student will be able to solve the paper within the time period. After completing the time, the test paper will be submitted automatically.

Step 5: Set form logo

While creating the exam paper, one can add the logo of their institute/company to make the form more readable and effective. It highlights the services as well as specialty of the institution. The logo is used to describe the structure and specialty of the organizations.

Step 6: Creating a new link

After applying various functionalities to this paper, the add-on will create a new link for that sheet. The teacher

should provide this link to the students for effective exam management.

Step 7: Solving the paper

The students should solve the paper via new form link.

Step 8: Auto-Submission of the exam paper

The user gets automatically logged off after he/she has finished the timeline.

Step 9: Uploading the csv file

After taking test responses from students, the teacher should upload the csv file of responses to the add-on. This will keep the record of every student.

Step 10: Email notifications

The students will get the emails from the teacher containing their subject details and marks. This improves the interaction between the teachers and students. This is also useful for maintaining the exam records.

3. CONCLUSION

By using this add-on, we can improve the quality of Google forms for effective test management. This will improve the quality of examination system. This project is developed for the efficiency of students and teachers. Here we have added many attributes and properties which leads to develop better system. The database will help to keep record of student's marks. This add-on is so easy to use. So user may use it without any trouble.

REFERENCES

- [1] 'Computer Hope', a free computer help-website has described the add-on as a script that is added to a program to provide extra features and functionalities, Updated: 31/08/2020 by Computer Hope
- [2] The Digital Guide website has explained- the add-ons are the programs that extends the functionality and features of the browser. Uploaded: 18/02/2021
- [3] The Chrome Web Store has also put the examples and the methods for creating the add-ons.
- [4] Google workspace Marketplace has put various add-ons for sample.
- [5] 'Google support' has provided the guidelines for creating a website.