Capstone Project – Modern Web Full Stack

Hackathon Event Management Application

**REVISION HISTORY**

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| --- | --- | --- | --- |
| **Date** | **Version** | **Description** | **Author** |
| Nov-27-2017 | 1.0 | Initial Version | Modern Web Full-stack team |

# Hackathon Event Management Application Overview

The proposed system will be used for end to end management of a **Hackathon Event**. It should follow responsive design so that the web page can be properly viewed on browsers on the laptop/mobile phone.

The application has to support the various stages of the hackathon event such as Creation of a hackathon event, run the event and archive the event on completion. Within each created event, it should support the following:

Advertising the Event – The home page of the application should show all the ongoing hackathon events. On clicking one event icon/link, it should take us to the event page which should provide all details of the event in an attractive and user friendly way. It should help to do an email based promotion of the event. Links to Facebook, Twitter etc should be provided for each event.

Team Registration – It should support registration of teams. Team name, number of people per team, contact details etc should be supported. It should be possible to configure the number of teams, team members in each team and other such parameters should be made configurable at the time of creating the event.

Idea Submission – It should support the idea submission by each registered team. A form of specific format can be provided for idea submission. Documents can be attached. Audio/Video recordings of specific length also can be supported as part of idea submission.

Evaluation of the teams either by reviewing their ideas submitted or through a programming test. The evaluation will be manual. Based on the evaluation result, the teams should be shortlisted and invited for the final competition phase. Alternately there may not be an evaluation phase at all. All registered teams can appear for the final hackathon event.

The final competition will go on for certain number of days which should be configurable.

At the end of which the participants will submit their code, executables, documents, audio and video materials supporting their problem and solution.

A set of reviewers will be assigned to review the submissions. There will be an evaluation template according to which they will evaluate and declare the final result.

The final result will be declared on the website. The result should mention winning teams in the various categories. It should also list all the participated teams and their solutions briefly. It should be attractive and should make the winners proud. The result announcement should happen on the facebook, twitter, yammer kind of social media also.

After the competition is over, the key aspects of the hackathon must be archived.

The user interface to the system should be implemented using Angular or React. In order to manage the data required for the system, an Express Server interfacing with MongoDB should be used. The REST based Express backend will receive the requests from the client side Angular or React and store the necessary data or retrieve the data.

The UI should be responsive so that it can be taken from browsers of the mobile phones also.

**Note:**

1. The features given below are the minimum basic features that are required to be implemented. But you need not limit yourself. You can try to make it as close to the real system and it is left to your imagination and the domain knowledge you possess.
2. To make the user interface better, you should use Bootstrap or Material.
3. Appropriate input fields should be used to make it user friendly. For example, where date is inputted, you should use a date field and not a string field.
4. Validations should be done, wherever applicable, and make it user friendly.
5. Wherever list of things are viewed, there should be Search filter provided to only display a subset of rows, so that user can quickly see it when there are many rows to be viewed (similar to how it was implemented in ILP).
6. While viewing, when different columns are displayed, customization should be provided to display only a subset of the columns (similar to how it was implemented in ILP).

Following modules should be implemented in the system.

1. Authentication Module
2. Admin Module
3. User Module(used by Hackathon Host, Participant, Evaluator)

## Authentication Module

Refer the document, **AdditionalDocument\_AuthenticationModule.docx** for an explanation of the details to be implemented as part of the Authentication Module. It contains details related to User authentication as well as Admin authentication.

## Admin Module

Admin should be able to Add, View, Update, Delete a Hackathon Event to the Application. Each Event should have a Hackathon Host(HH), a role who will have all access permissions to conduct all the online activities of the event. All the ongoing events should be shown on the home page of the application.

## User Module

Three types of users to be supported namely: Hackathon Host(HH), Hackathon Participant(HP), Hackathon Evaluator(HE).

High Level requirements of a Hackathon Host(HH):

1. A Hackathon Host(HH) should be able to log in to the application using the credentials created by the admin.
2. HH should be able to **configure** the hackathon event such as defining the workflow of the event, how a HP can register a team, how to add team members, how many team members can be added, how to submit the ideas, how many ideas can be supported per team, what is the start date, end date for each sub-phase of the event, what is the evaluation procedure, who are the evaluators, what are the prizes etc. A HH interface should be provided to do this configuration.
3. HH should be able to **publish** the required hackathon event details on the event page. This includes workflow of the event which details out how a HP can register him/herself and his/her team, how many team members can be added, how to add team members, how to submit the ideas, how many ideas can be supported per team, what is the start date, end date for each sub-phase of the event, what is the evaluation procedure, who are the evaluators, what are the prizes, what is the final result , ability to share the event on facebook, twitter, linkedin etc.
4. HH should be able to add, view, update and delete HEs to the event. It should be possible to assign HEs to the projects they need to evaluate. One HE may be assigned to one or more projects. One project might be assigned multiple HEs also for evaluation. Criteria for evaluation should be configured by the HH. The criteria should be made available to the HE during evaluation as an evaluation form.

High Level requirements of a Hackathon Participant (HP):

1. HP should be able to register the team and its team members.
2. HP should be able to submit the idea with supporting documents/audio/video.
3. HP should be able to submit the eligibility requirements if any(such as some problem being solved to demonstrate coding ability).
4. HP should be able to view the shortlisted teams for the final round of the hackathon so that HP could know if they qualified for the finals.
5. Final code implementation should be submitted into Wipro gitlab. The link for the same should be provided in the application as submission artefact. Along with that any documents, audio or video artefacts also should be uploaded to the application.

High Level requirements of a Hackathon Evaluator (HE):

1. HE should be able to evaluate the submitted idea or eligibility criteria(code submission as part of eligibility or similar criteria, if any) and select/reject a team.
2. HH would have assigned one or more projects to a HE for evaluation. HE should be able to view the artefacts submitted by those project team(s). HE should be able to view the document, audio, video recordings submitted.
3. Should be able to fill and submit evaluation form(should capture comments also), rating against each criteria of evaluation (Rating scale evaluation on a scale of 1 to 10, 10 being best).
4. Final winning teams should be calculated based on aggregation of the ratings by the HEs and calculating the scores of each team.