ITSP Documentation

EVENTual

Idea:

The idea of the project was to create a way to share event details amongst friends and circles with great ease. This was coupled with calendar integration to facilitate saving events in the Android calendar or Google calendar.

Problem:

The idea struck when we noticed the difficulties people encountered in taking down event details and keeping a record of events that they were interested in. With a good 10-20 events happening every week in our institute, it indeed gets troublesome keeping a record of those which might be important to oneself. People initially painstakingly save events to their phone calendar or note it down but soon give up the habit because of the number of events and the effort required. Some people take photographs of the posters but rarely anyone sees them again.
Our project aims to solve this problem and bridge the gap between people and their calendars.

Solution and Implementation:

We thought of a solution in which event details only have to be noted down once, and then can be shared using links and a QR Code. One would just have to tap on a link or scan a QR Code from the event poster and the event would be automatically saved to his calendar.
A shareable link and QR Code would be generated as soon as the event is created and can be found again by searching for the event or under the "My Events" section.

- **Sharable Link**: A sharable link, when opened using a browser would open a sleek webpage consisting all the details of the event. When clicked in an Android device, it would give an option to "open using app EVENTual" (as is done by apps like Youtube, Quora etc using deep linking). Upon selection of this option, the app would open with the event details and an option to share the link and QR Code along with an "Add to Calendar" option.

- **QR Code**: A specific QR Code can be obtained for each event using either the website or app. A QR Code scanner that is built in the app can scan such a QR Code and can then "Add to Calendar".
- **Add to Calendar**: Upon clicking this button, the data fields in the Android default calendar's "Create Event" screen are populated with the event's details. These fields can then be edited and additional fields can be filled by the user. Clicking save here would save the event to the calendar.
  Tip: Any third party calendar can be configured as the Default Android Calendar in Android by granting the required permissions.

Technicalities:

Domain and server:

The domain we are using is www.eventual.co.in, served using the WnCC server.

Website

The website is created using a html5up template called Spectral (https://html5up.net/spectral). The backend is based on Django and various elements like datepicker and table view are generated using jquery.

Site Map

```
------ / (Landing page)
  |-- /create (Create Event)
  |-- /search (Search Event)
  |-- /event/<id> (Event display page)
  |-- /about (About page)
```

Backend

Our website is served using the Django framework. The website handles various http requests:

- **GET Requests:** The different webpage HTMLs are returned when a GET request is made to the website at /, /create, /search, /about and /event/<id>.
- **POST Requests:** Creation and saving of events happens when a POST Request is made with the JSON containing the fields for the event as parameters. The response is the event number. While searching for an event,

all fields are again passed as parameters in a JSON. The response is a list of JSONS containing event details.

When a POST request is made to /create, all params are extracted from the JSON and a search is made to see if an exact (with all fields provided as filters) event exists. If it does, the event ID (a unique number for each event) is passed as response. If it doesn't, a new event is created through query and the new generated event ID is passed as response.

When a POST request is made to /search, all non-empty params are extracted from the JSON and a search is made using those as filters in a query.

Various functions have been used for backend functioning:

1. landing - Render the homepage of the website(http://eventual.co.in/).
2. create - A GET request renders the webpage for event creation (http://eventual.co.in/create) while a JSON POST request creates the event and returns back the id. The post request if for event creation through the app.
3. event_get_or_create - This function stores the event information in the database if it is not already present. Finally sends back the eventID.
4. create_web - This is for storing events through the website. Parses the POST request from the form. This had to be made seperate from the create function because the json format in the web form is slightly different.

Android

The android app uses libraries and packages like QR Code scanner, okhttp (For HTTP requests) etc. The android app consists of five main activities:

Main Activity: Displays the List of buttons to navigate to different activities namely, "Create Event", "Search Event", "My Events" and "Scan QR Code".

Create Event Activity: Displays fields which can be filled by the user. The data from these fields are then assembled in the JSON and an http POST request is made using the okhttp client. When a response is obtained with the event ID, the ID is passed to the Search Result activity along with the intent.

Search Event Activity: Displays fields which act as filters for the search. Similar to the create page these are assembled into a JSON and posted using the okhttp

client. The results are loaded in a scrollable list view. Clicking on any result opens the SearchResult activity with the event ID passed along with the event.
Search Result Activity: This activity is for displaying an event (using the ID). This activity receives an intent from either the Create or the Search activity. It extracts the Event ID that came along as an "extra" with the intent. This ID is then passed in a JSON as a POST request to /search which sends all the details for this particular event. All details are loaded and a QR Code is generated on screen. Buttons are available to share the QR Code and the link of the event. An "Add to Calendar" option exists to add this event to the default Android calendar.
My Events page: This activity performs a search based on the username. This thus returns a list of all events that have been created using the username on the Android device.

Contact

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