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National University
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National University of Singapore CP2106 Orbital

Orbital 23 Proposal - Advent

Chu Wei Rong

Pham Quang Nhat (Nathan)

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1 Team Name

Team name: Advent

2 Proposed Level of Achievement

Proposed Level of Achievement: Artemis

3 Motivation

We, as university students often come across websites for event registration, which include musical concert websites. Many of such event websites would redirect users to a third party website for registration. This includes popular events like the Blackpink concert where users are redirected to a third party website (Ticketmaster) for registration. To use Ticketmaster, users have to sign up for an account under the Ticketmaster website before being able to register for the event itself, which is time-consuming, inconvenient and exposes their personal data to more organizations.



Figure 1: Blackpink Website

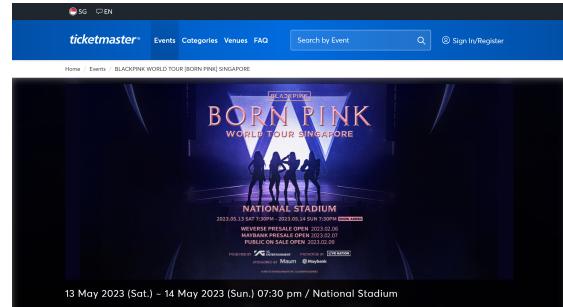


Figure 2: 3rd Party Website - ticketmaster.com

Case study: Blackpink's concert registration

For smaller scale and lesser known events, redirecting to a third website can even come off as unreliable and fraudulent.

I (Wei Rong) am a resident of Raffles Hall and in one particular hall event - Raffles Hall Musical Production, the production marketing team created a website to advertise themselves. To allow people to register for the event, they created a button to redirect users to another website, however, this introduced a point of failure in the chain and some users were unable to purchase the tickets.



Figure 3: RHMP Website

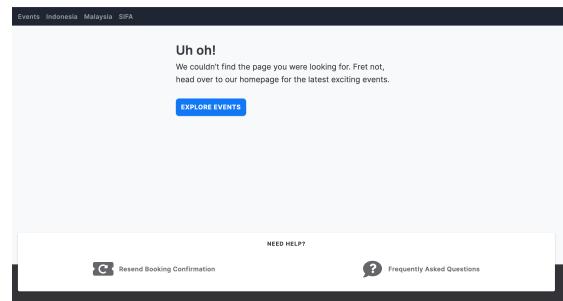


Figure 4: 3rd Party Website - bookmyshow

Case study: Raffles Hall Musical Production (RHMP)

The usage of a third party website for registration also corresponds to allocating a part of the organisers' expense to use the service of the party providing the sign up form and storing data. The sign up form provided by this middleman website often does not fit the event's theme and aesthetic.

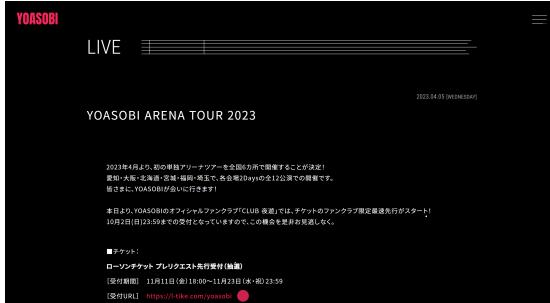


Figure 5: YOASOBI Website

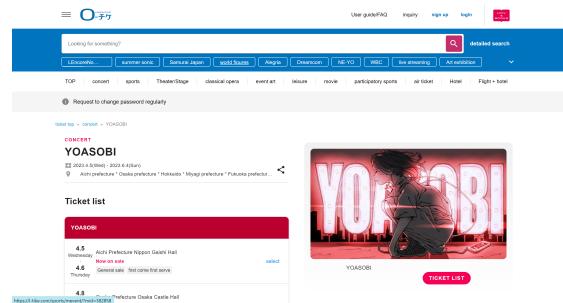


Figure 6: 3rd Party Website - l-tike.com

Case study: YOASOBI

- The original YOASOBI website had live animation and the color scheme is black [<#000000] and red [<#ff2c60]
- The color scheme of the third party website is blue [<#0074be] and white [<#ffffff], a contrasting color scheme.
- The font used between the websites are different too, “Noto Sans JP” in the original website and “Hiragino Kaku Gothic Pro” in the sign up website.
- In the redirected sign up website, users are also exposed to other events on the menu bar.
 - There are potential distraction that might affect the decision of interested registrants. They might look up other events advertised on the 3rd party website and not register for the original event.
 - Profit of the original event organiser could be affected as a result.

To avoid such unwanted scenarios, the sign up form should be available on the event's own website for the convenience of interested users. Tracking of registration data (number of participants, age group, popular time slots) would also be easier and the event organisers will not have to pay a % of revenue as service fee or worry about a potential failure in the third party registration website.

With the aim of creating a customisable registration framework that can be integrated into each event's website. We came up with the idea for Advent to create a frictionless solution to solve the 3 problems:

1. Eliminate sign ups on 3rd party websites
2. Reduce introduction of new points of failures
3. Have the event sign up form fit the design theme

4 Aim

To provide a Software-as-a-service (SaaS) where users (event organisers) can create events and integrate a customisable registration framework - integrate a custom event landing page and a custom registration form to their own website. Therefore, adhering to a consistent styling and look. The user should be able to view registrants' data on our dashboard with charts to help visualise, or even use an API to fetch the data.

5 User Stories

1. As an event organiser, I want to be able to easily integrate a customisable event landing page and a register form in my website through iframe or by copying the source code onto my website.
2. As an event organiser, I want to be able to allow interested individuals to register without going to a third party website.
3. As an event organiser, I want to be able to view data of registrants on a dashboard.
4. As an event organiser, I do not want concerns related to a potential failure in the sign up service provider website.
5. As an event participant, I want to be able to easily sign up for an event without leaving the original event webpage.
6. As an event participant, I do not want to go through additional signing up procedures in the third party website before getting to actual registration part for the event.

6 Features and Timeline

The main web app provides an interface for event organisations to sign in and create new events, customise the event landing page & sign up form, view collected data on a dashboard. Of which, the landing page and sign up form can then be easily transferred over to their own website in the form of an iframe or source code through copying and pasting (following a detailed step-by-step instruction that we will provide to the users on our website).

Here are the prioritised features we plan to accomplish by the end of June:

- Authorisation on web app
- Customisable Landing Page
 - Adding event banner/images via image link
 - Showing location of event with Mapbox.js
- Customisable sign-up page
- Allow users to integrate into their website with iframe
- Data Dashboard to view collected data

Here are the less prioritised features we plan to integrate by the end of July once we accomplish the main features above. The below features are ordered based on their priority:

- Functional code editor on our web app (with autocomplete and syntax)
- API to fetch collected data
- Payment system with Stripe
- Highly Customisable Data Dashboard
- Drag & Drop Feature for Customising Event Pages

7 Tech Stack

1. Frontend: Next.js, React, Tailwind CSS
2. Design: Figma
3. Backend: Next.js
4. Authentication, Database: Firebase
5. Testing: Jest, React Testing Library
6. CI/CD, Version Control: GitHub
7. Deployment: Vercel

8 Qualification

8.1 Chu Wei Rong

- Hack&Roll 2023 Best Freshman Hacks.
- Gold Medal for Malaysia Computing Challenge organized by the Malaysian Informatics and Programming Society (MIPS).
- Intermediate knowledge of React, TailwindCSS, Vite, Vercel: Used in Hack&Roll hackathon.
- Intermediate knowledge of Firebase, Flutter: Used in Oxbridge Academic Exploration.
- Intermediate knowledge of Python, Pandas, Matplotlib: I perform data visualisation and data cleaning as part of NUS Fintech Society.
- Intermediate knowledge of Git, Github: I use git and github for version control management.
- Beginner knowledge of Bootstrap, Django, Heroku: In a team of 4, I developed a blog website to aid Malaysian high schooler in understanding physics topics.
- Intermediate HTML, CSS, Javascript.
- A+ in CS1101S.
- ASEAN Undergraduate Scholar

8.2 Pham Quang Nhat (Nathan)

- Web designing concepts and experience: I have a basic grasp of some UI/UX concepts and principles through past experience of designing websites for CCAs and for academic purposes (I created a blog website to instruct teachers' and students in using online learning software during the pandemic).
- Web development technologies: I have a basic grasp of HTML, CSS and DOM manipulation with JavaScript to create dynamic HTML.
- Intermediate knowledge of Java for Object-Oriented Programming paradigms and practices.
- Beginner knowledge of C, C++: I can develop a simple game on Unity3D.
- Beginner knowledge of R for data visualisation.
- Beginner knowledge of Firebase for back-end, and Vercel for front-end deployment and back-end hosting.

- Beginner knowledge of Next.js: completed the blog tutorial provided by Next.js.
- A in CS1101S.
- ASEAN Undergraduate Scholar