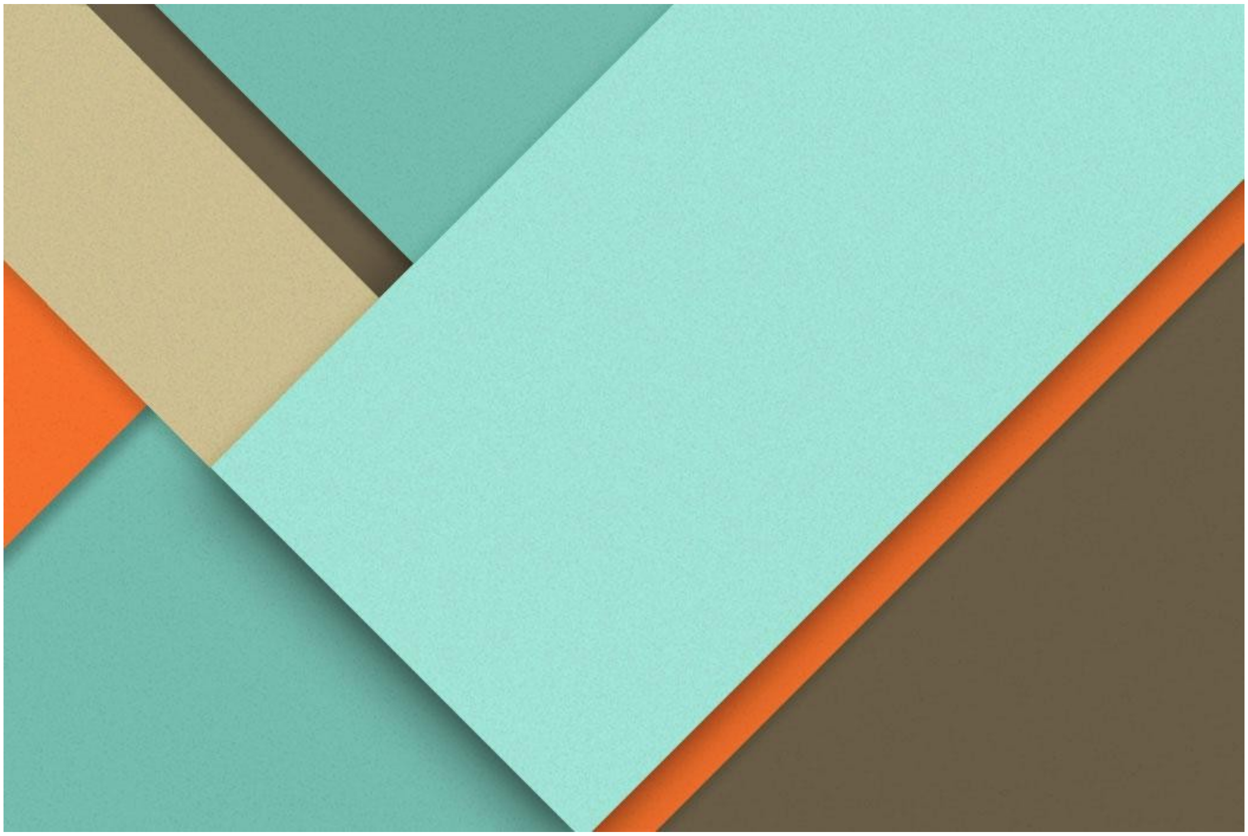

SHARIK UIK LIVE

v 0.0.1

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Toumi Mustapha Abderrahmane
Full stack web developer & software engeneering student
mohamed djanhlen B 73 number 02
Tiaret, 14000
website : abderrahmane-mustapha.codes

Overview

Our mini project entitled "Sharik" about WEB Programming aims to put civic technology into practice at Ibn Khaldoun University in Tiaret. to bring out new ideas for practicing environmental protection relying on digital.

Goals & Objectives

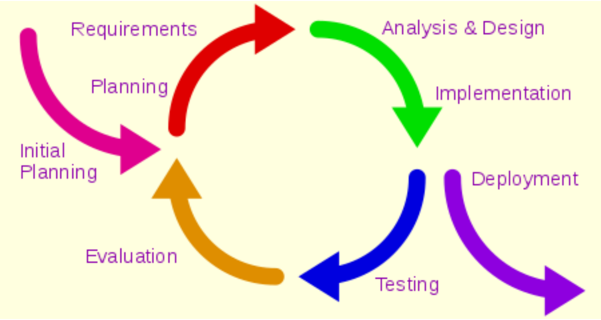
1. Create a website a for ibn khaldoune students , Teachers , staff and everyone in the university
2. Everyone in ibn khaldoune univeristy can participate or contribute in this website
3. Make everyone in the university participate in making ibn khaldoun faculties, classes ... a better place
4. A platforme To share new ideas by creating and managing events , writing blogs , interacting with other user, sharing ideas , and publishing educationel content
5. The website must use gamification to make a positive impact based on **Octalysis – the complete Gamification framework**
6. Encourage socialization and competition using game element
7. A website Easy to use with a beatiful interface
8. A responsive Website work on phones and desktops screens
9. This website can be installed on phones and desktops just like a native app by applying progressive web apps principles
10. This website must load faster without consuming so much data especially for those who use mobile data (we need to use serviceWorkers, indexedDB , caching and more ...)
11. In This website there is no difference between a student , a teacher or any one who work in the university they can all join this website and they all start as a simple users
12. Everyone start from a simple user and they can get a higher level by doing more

    (most impact and influencing = most rewards)

Planing

Planning may not be the most enjoyable component of managing projects but as they said good planning saves hours of coding and useless requirements or as abraham lincon said “"Give me six hours to chop down a tree and I will spend the first four sharpening the axe."

So after reading and understanding the project i moved to choosing the best software engineering model or approach to follow in order to create this website its Iterative and incremental process , this approach make it easier for me to divide my project into small parts so I can   analyse , plan , code and test each part separately

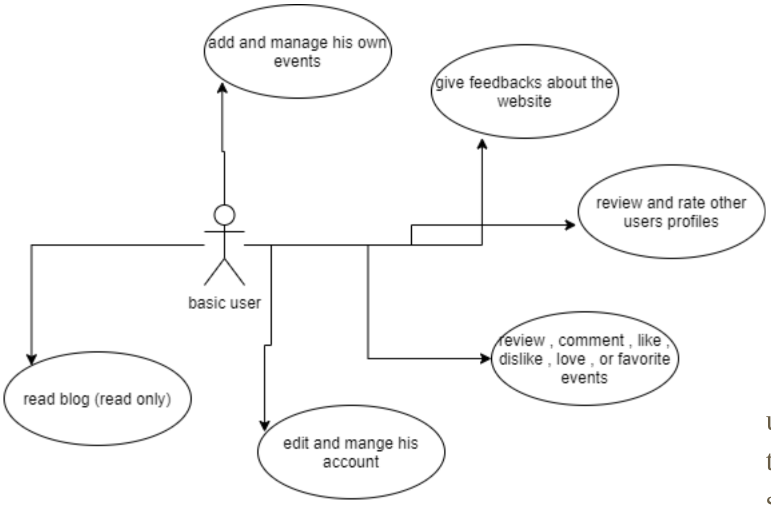


UML Diagrams

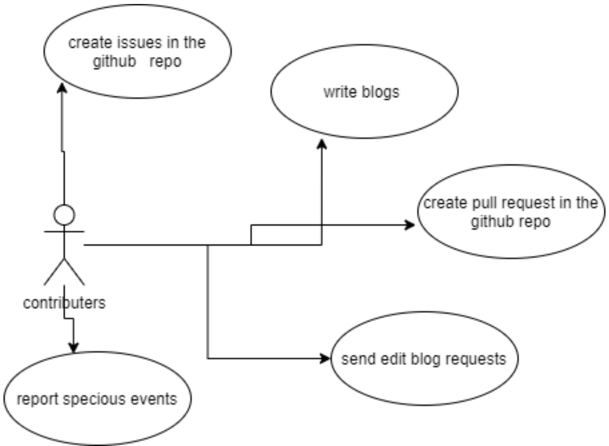
Lets start with a simple use case diagrams

user types : basic users , contributors, maintainers, admins

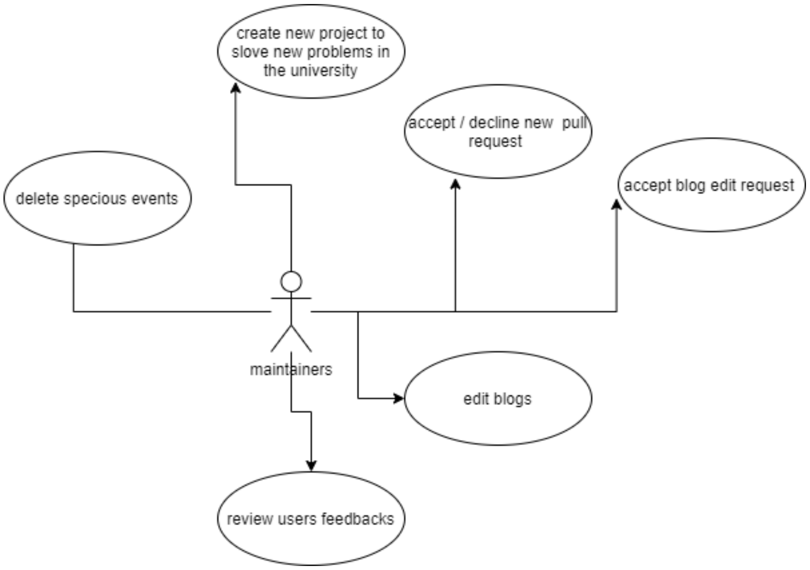
This diagram below shows what can a simple / basic user do (all the website users)


add and manage his own events
give feedbacks about the website
review and rate other users profiles
basic user
review , comment , like , dislike , love , or favorite events
read blog (read only)
edit and mange his account

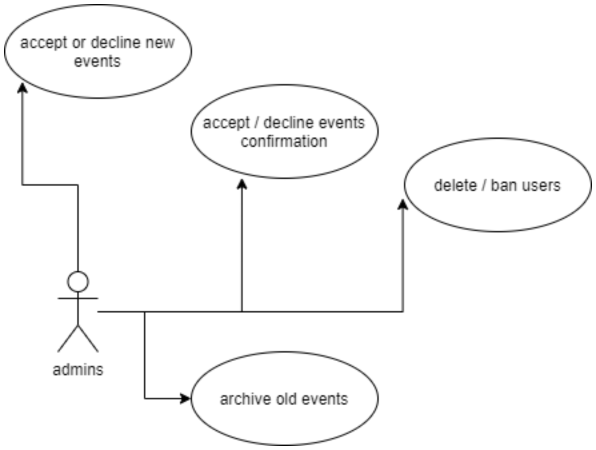
The Contirubutor is basic user who can do more as this use case diagram below show


create issues in the github   repo
write blogs
create pull request in the github repo
contributers
send edit blog requests
report specious events

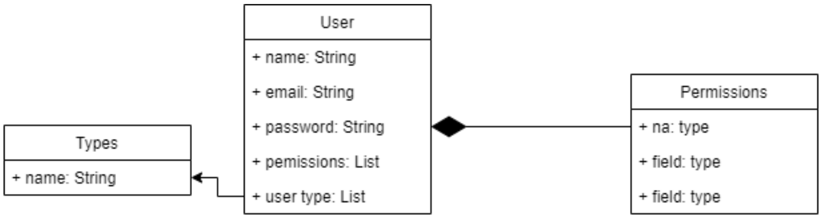
Maintainers are those who manage the github team and pull request , they can create new projects to solve new problems in the ibn khaldoune university


create new project to slove new problems in the university
accept / decline new pull request
delete specious events
accept blog edit request
maintainers
edit blogs
review users feedbacks

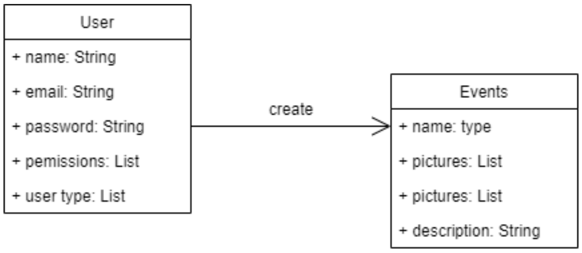
finally admins


accept or decline new events
accept / decline events confirmation
delete / ban users
admins
archive old events

The picture below shows a class diagram representing the four different users

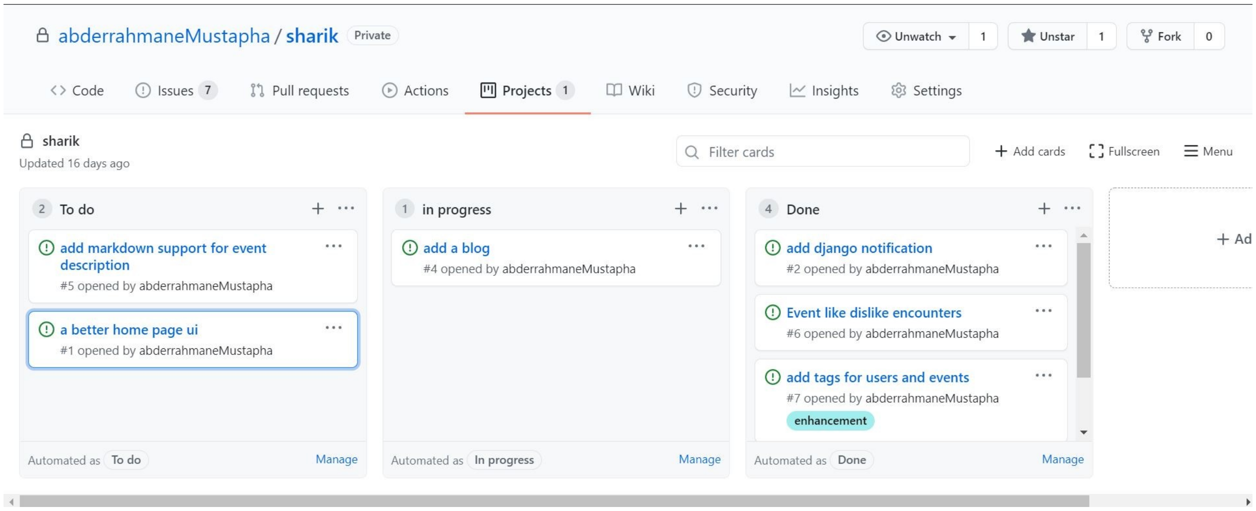


In this picture below we can see how a user can create new events



Tasks and daily planing

To Visualize all of my work and prioritize it right alongside with the code i used the github project task board to set goals and manage my project todo list , the task board is linked with project issues and pull requests , the picture below show sharik task board



sharik

Updated 16 days ago

2 To do

add markdown support for event description
#5 opened by abderrahmaneMustapha

a better home page ui
#1 opened by abderrahmaneMustapha

Automated as To do — Manage

1 in progress

add a blog
#4 opened by abderrahmaneMustapha

Automated as In progress — Manage

4 Done

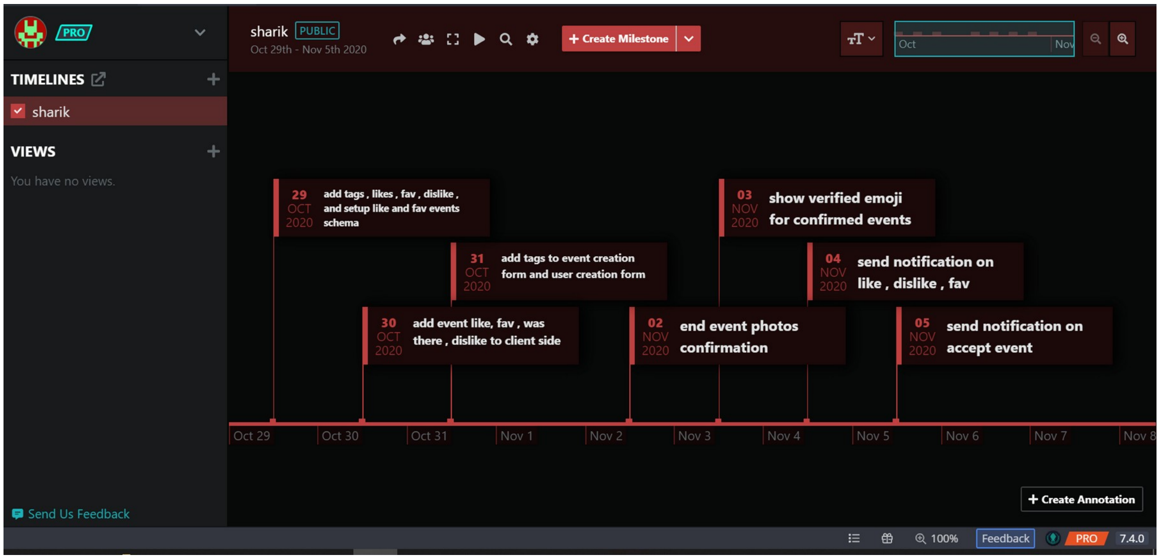
add django notification
#2 opened by abderrahmaneMustapha

Event like dislike encounters
#6 opened by abderrahmaneMustapha

add tags for users and events
#7 opened by abderrahmaneMustapha
enhancement

Automated as Done — Manage

To keep your self organized you should set a daily goals for this i used the gitkraken timeline , beautiful UI and easy to use, the photo below show sharik timeline



29 OCT 2020 add tags , likes , fav , dislike , and setup like and fav events schema

03 NOV 2020 show verified emoji for confirmed events

31 OCT 2020 add tags to event creation form and user creation form

04 NOV 2020 send notification on like , dislike , fav

30 OCT 2020 add event like, fav , was there , dislike to client side

02 NOV 2020 end event photos confirmation

05 NOV 2020 send notification on accept event

Languages & Frameworks & technical choices

I. Python

Python is one of the most popular programming languages today
Python web development quite simple because you can easily achieve more functions with fewer lines of code. Basically, if you know the basics.

Web development with Python is particularly popular among rookies because of its readability and efficiency.

II. JavaScript

The JavaScript language is easy to learn and offers syntax that is close to English. It uses the DOM model that provides plenty of predefined functionalities to the various objects on pages making it a breeze to develop a script to solve a custom purpose

JavaScript does not require compilation process so no compiler is needed. The browser interprets JavaScript as it HTML tags

III. Django vs Nodejs

As both of these technologies are equally popular and versatile, it is generally a big question to decide which one of the one to use for your upcoming project. There are several ways for an app to run on technologies. Choosing an application solely depends on the requirement of that particular app.

Django is more secured and comes with a built-in system, preventing any security deficiency. NodeJS is not as secured as Django and requires manual operations in the system to manage security flaws.

Django offers better performance, as there is a built-in house template system facilitating the execution of a required task quickly, The performance of NodeJS is also good, as it allows the web professionals with more freedom when it comes to implementations. But again, this increases the overall time required to build the application.

I picked django because i didnt have so much time to create this app and because im more familiare with django then nodejs .

But im planing to use both of this powerfull technolgies in the future version of this app , django for authentification and when security is important , nodejs for my blog , messaging and comment system

IV. RabbitMQ

RabbitMQ is the most widely deployed open source message broker.

Why rabbitMQ !! , its because im gonna use two different technologies for my app django and nodejs and rabbitMQ is gonna manage the communication between this two technologies

V. GraphQl

GraphQL is an open-source data query and manipulation language for APIs, and a runtime for fulfilling queries with existing data. GraphQL was developed internally by Facebook in 2012 before being publicly released in 2015

why graphql !!! **GraphQL allows making multiple resources request in a single query call, which saves a lot of time and bandwidth by reducing the number of network round trips to the server. It also helps to save waterfall network requests, where you need to resolve dependent resources on previous requests**

VI. django graphene

Graphene-Django is built on top of Graphene. Graphene-Django provides some additional abstractions that make it easy to add GraphQL functionality to a Django project

VII. React

React is an open-source, front end, JavaScript library for building user interfaces or UI components. It is maintained by Facebook and a community of individual developers and companies. React can be used as a base in the development of single-page or mobile applications

why React!! Reusable Components, Fast render with Virtual DOM, Great Developer Tools

and im familiare with react

VIII. Appolo react

Apollo Client is a comprehensive state management library for JavaScript that enables you to manage both local and remote data with GraphQL. Use it to fetch, cache, and modify application data, all while automatically updating your UI

Apollo Client helps you structure code in an economical, predictable, and declarative way that's consistent with modern development practices. The ore *@apollo/client* library provides built-in integration with React, and the larger Apollo community maintains integrations for other popular view layers.

IX. JWT Authentification

JSON Web Token (JWT) is an open standard (RFC 7519) that defines a compact and self-contained way for securely transmitting information between parties as a JSON object. This information can be verified and trusted because it is digitally signed. JWTs can be signed using a secret (with the HMAC algorithm) or a public/private key pair using RSA or ECDSA

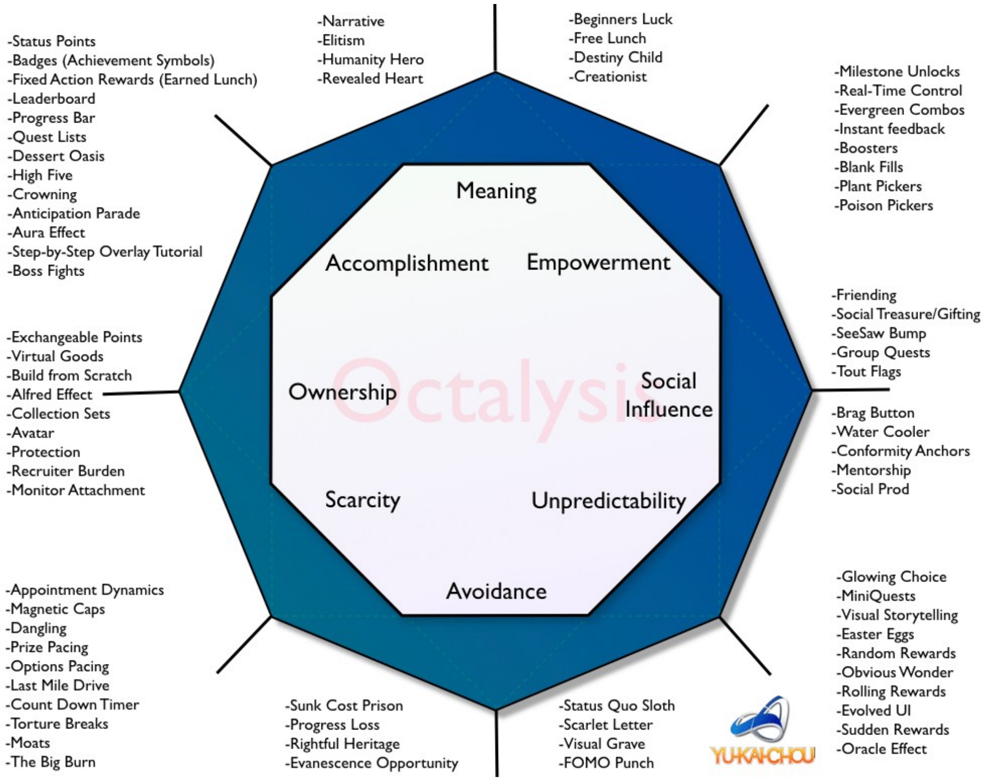
Make users fall in love with the website

First of all your website must load fast, Page loading time is obviously an important part of any website’s user experience. And many times we’ll let it slide to accommodate better aesthetic design, new nifty functionality or to add more content to web pages. Unfortunately, website visitors tend to care more about speed than all the bells and whistles we want to add to our websites. Additionally, page loading time is becoming a more important factor when it comes to search engine rankings.

We need to use game design techniques or Gamification works by encouraging users to engage in desired behaviors, by showing a path to mastery, and by taking advantage of our human psychological predisposition to engage in gaming. Smart marketers use it to increase consumer engagement and influence consumer behavior.

Or as yu kai chou said “**Gamification is the craft of deriving all the fun and engaging elements found in games and applying them to real-world or productive activities**."

The pictures below shows a photo of the gamification framework created by yu kai chou



in the app im using :

Meaning : students can convert their points in the platform to a real points on exams

Accomplishement : user level and tasks progress bar , leader board

Empowerment : user can give feedbacks about events , blogs , they can like and dislike them

Social influence : user can join and organize events in real life , they can share and exchange ideas between each other

users can contribute to the platform code

Conclusion :

Thats all for now this project is still in progress as a side project i have more ideas we can create a community where students can exachange and share their ideas , and create solutions for ibn khaldoune university problems, in the same time we are preparing our students for real life projects

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