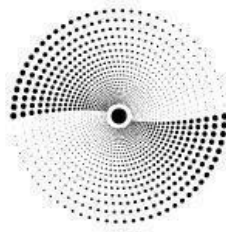


Software Requirements Document

Version 1.0

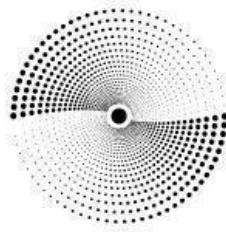
Apr 21, 2022

UNIVERSALDOT FOUNDATION



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Revision History

Name	Revision comment	Date
Igor Stojanov	Initial draft	04/03/2022
Igor Stojanov	Version 0.1	31/03/2022
Igor Stojanov	Version 1.0	21/04/2022



Project Description

Overview

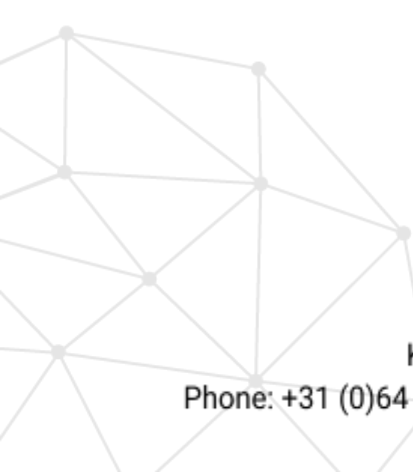
UNIVERSALDOT FOUNDATION is building an application that will enable organizations to be started solely based on vision. The platform application will enable users to organize virtually around a common vision, issue their own currency as stock, create tasks and organizations. People will be able to create digital identities with personal skills and interests, and instead of finding work, tasks will be recommended to them based on their personality profile. The freelancing type of work will allow them to choose for whom they work and how much they get paid for their effort.

Product

[Universaldot.me](https://universaldot.me) is a decentralized web application that aims to reinvent the future of work. This application enables freelancers to create/complete tasks and organize themselves into geographically distributed organizations. The product is built on top of proven blockchain infrastructure, namely Substrate, which has provided the needed groundwork for the product.

Main Features

- creation of personal profiles
- The ability to create and complete tasks
- The ability to create digital organizations





Product Design

Entity Model

There are three main entities in the application. These are the following:

- Profile
- Task
- DAO

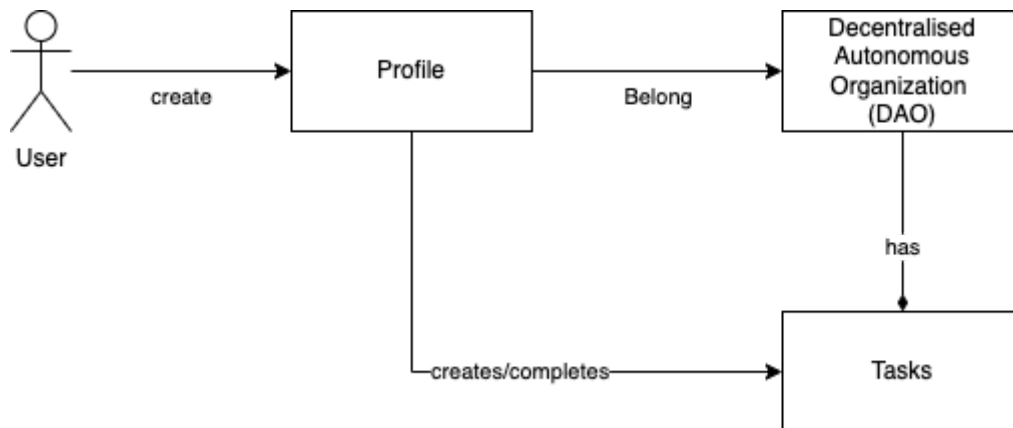
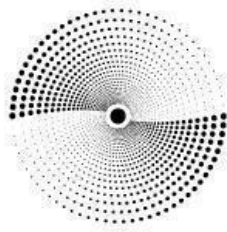


Figure 1. Entity Relationship Diagram

Data Model

Profile

Characteristic	Description	Type	Entry
AccountID	Primary ID for a profile. One profile per AccountID	Pub key	Automatic
Username	Personal description of profile	String	Manual, Mandatory
Interests	Personal interests of the user. Can incorporate skills, preferences, etc.	Array of Strings	Manual, Mandatory

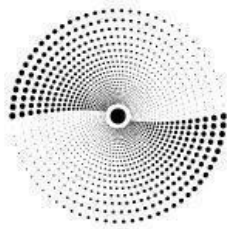


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Reputation	Score of points that the User has earned	Number	Automatic
Balance	Cryptocurrency balance in the native chain coin	Number	Automatic
Portfolio	User can showcase personal portfolio, additional description, etc	String (may contain list of IPFS documents)	Manual, Optional
Availability	Hours per week the User is Available	Number (approx. Or list of 10hr,20hr,30hr)	Manual, Mandatory
Profile History	Previous work history of the User	Array of Tasks	Automatic

Task

Characteristic	Description	Type	Entry
TaskID	Unique Identifier for each task	Hash	Automatic
Title	Task Title that describes the task	String	Manual, Mandatory
Requirements	Definition that specifies the requirements of the task	String (RichTextEditor?: JSON-Strigify)	Manual, Mandatory
Budget	The budget for a task	Number	Manual, Mandatory
Deadline	Expected end time for the task	Datetime	Manual, Mandatory
Attachments	Additional information that is relevant to a task.	File (Referenced by IPFS Hash)	Manual, Optional
Keywords	Few words used to filter the task (mainly used for the recommendation)	Array of Strings	Manual, Optional
Feedback	Comments that are added to the task. Intermediary	String	Manual, Optional

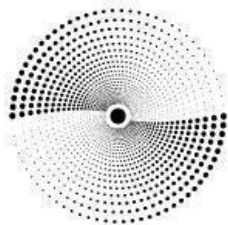


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	steps of communication between the initiator and volunteer		
Initiator?	The User who created the task	AccountID	Automatic
Volunteer?	The User who Volunteered for the task	AccountID	Automatic
CurrentOwner	The user who currently is working on the task and thus has ownership of it.	AccountID	Automatic
Related	Group of tasks that are related to the current task.	List of Tasks	Manual
Status	The current status of the task	Enum [Created, InProgress, Closed] To be expanded?	Automatic
Created	The time the task was created	DateTime	Automatic
LastUpdated	Time when the task has been updated	DateTime	Automatic
Completed	Time when the task was completed	DateTime	Automatic

DAO

Characteristic	Description	Type	Entry
ID	Unique identifier for an organization	UUID or similar	Automatic
Name	The name of the organization	String	Manual, Mandatory
Description	Basic description regarding the organization, industry, and goals	String	Manual, Optional
Owner	The account that owns the	Account ID	Automatic, Mandatory



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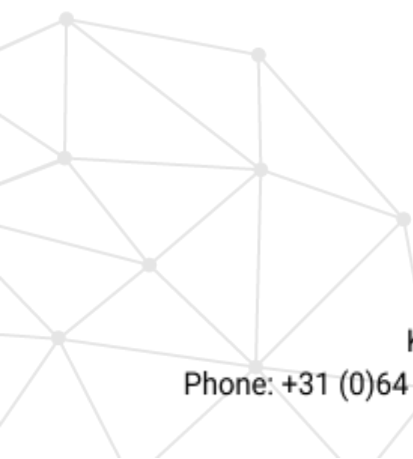
	organization. The initial owner is the founder. Ownership should be able to be transferred to other accounts.		
Vision	Document that describes company Vision	String (Hash to IPFS Document)	Manual, Mandatory
Members	Members that belong to an organization	Array of AccountID	Manual, Mandatory
Tasks	Tasks that belong to a certain Organization	Array of TaskID	Manual, Mandatory
Applicants	Users that have applied to join to a certain organization	Array of AccountID	Automatic
Created	The date when the organization was created	DateTime, Block	Automatic
LastUpdated	The date when the organization had an update	DateTime, Block	Automatic
Properties	Custom collection of properties that can be added.	An array of Objects	Manual, Optional

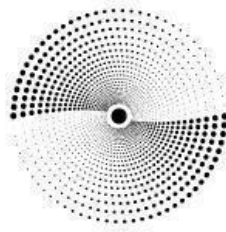
Events

Substrate issues Events for every blockchain Interaction. Most events are related to AccountID, but some events might be trivial.

We have to enable a process that can handle events and process them as notifications, error messages, etc.

Make List of Substrate Events-





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Software Design

High-Level Architecture

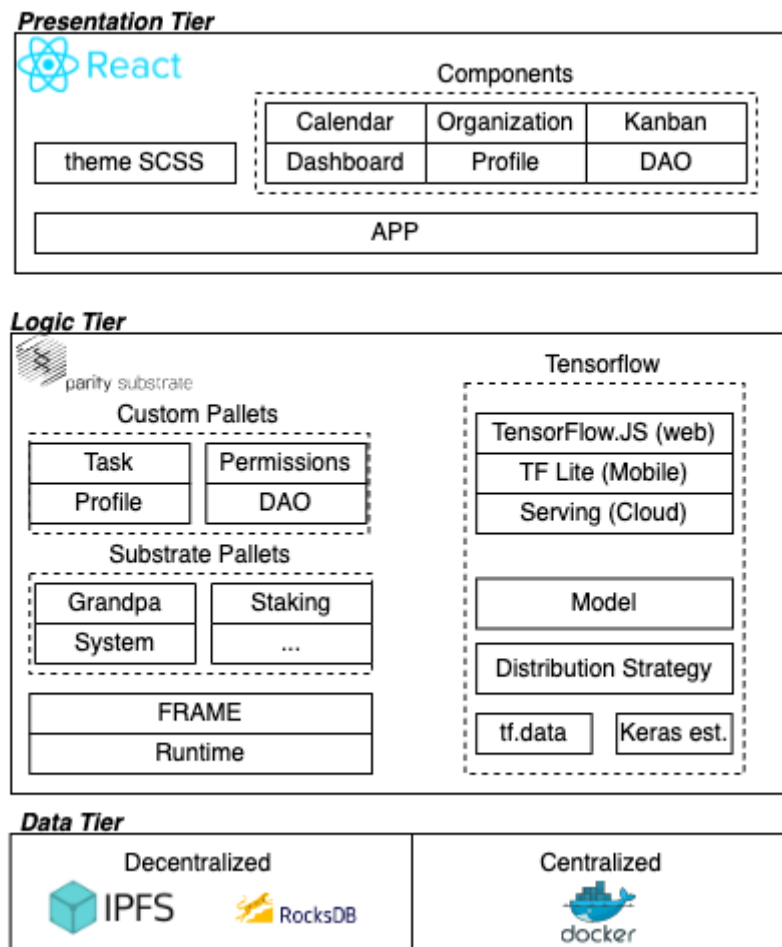


Figure 2. High-Level Architecture of the Solution

Technical Constraints

The application inherits functionality and constraints from the Substrate framework, React, Polkadot JS, and other software applications that use internally.

Substrate

- Configurable block time (6 seconds)
- Configurable Genesis Configuration



- Performance limitation on the amount of data to be stored on-chain.
- Communication through Web-Socket to distributed Nodes.

React

- Semantic-UI React design components for reusability

Tensorflow

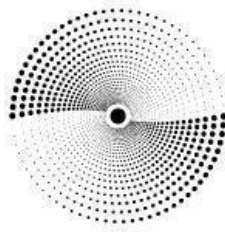
- Centralized Server Architecture
- Real-time Recommendation system

PolkadotJS

- Encode/Decode for Rust types
- Keyring
- Other dependencies

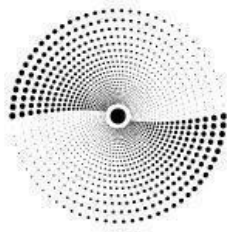
Quality Attributes

Quality Attribute	Sub-attribute	Description
Security	Direct communication	Operations have to be submitted directly to the blockchain nodes
	SSL, TLS, WSS	All communication happens through Secure Transport Layer
	Wallet	The user accounts are injected through Polkadot JS web-addon. This delegates the security to a secure external tool.
Usability	User-friendliness	The web app should provide convenient, non-technical UI & UX
	Client-side validations	The web app should validate operations before sending them for signing/to the blockchain (e.g. negative numbers for deadline)
	Human-readable errors	The web app should provide any errors/warnings in non-technical explanation to the user



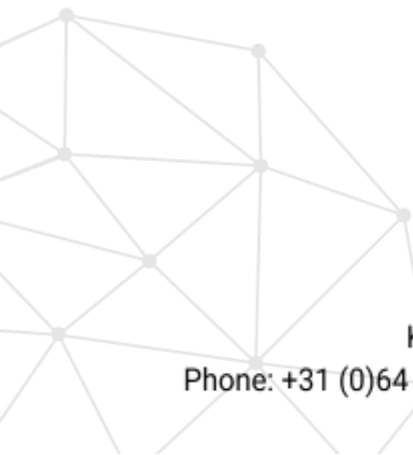
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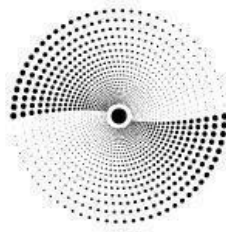
	User interface aesthetics	The UI elements (shapes, font, colors, sizes) should align with each other to provide a pleasing and satisfying experience for a user
	Shimmering for the data loading	During the data loading, there should be placeholders that represent a preview of the content to be loaded
	Known terminology	The web app will have similar terminology as other web-based projects.
	Accessibility, language	The web app should be available to be used in different languages & region support (e.g. locale currency format)
	Accessibility, visual impairment	Large font size-mode
Performance	Speed	The web application should be able to process information fast by making API calls through secure web socket
	Optimized networking	API calls should be focused on specific features, avoiding generalized calls containing data that is not going to be used
Reliability	100 % uptime	The web application should be available at all times
	Fault tolerance	The app code should be developed & tested to avoid crashes
	Recoverability	If operation failed the web app should provide an opportunity to re-send the operation again, without a need to re-construct & re-sign everything from scratch.
	Data source fallback	The web app should handle faulty/error responses from 3rd



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		party services
Updatability	Deployment	The Deployment of the application should be automated and should be straightforward.
	Runtime updates	The web app should be able to fetch & adapt to runtime updates
Modifiability	Modularity	Adding new functionality (e.g. features) to the app should be convenient.
Installability	Browser agnostic	The web app should be available on all major web browsers.

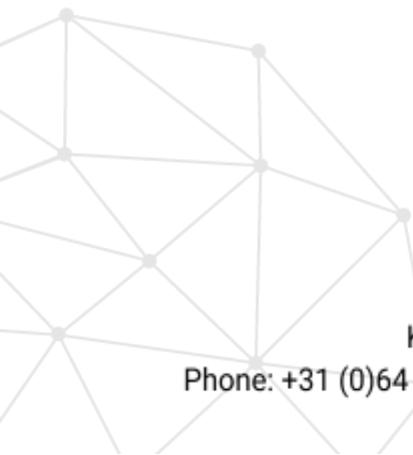


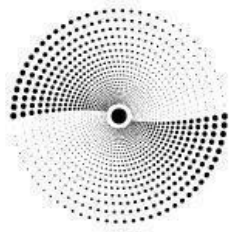


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User Interface Design

Prototype





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Begin your new adventure!

[Sign up](#)

Name

John Doe

E-MAIL

JohnDoe@gmail.com

Password

• • • • •

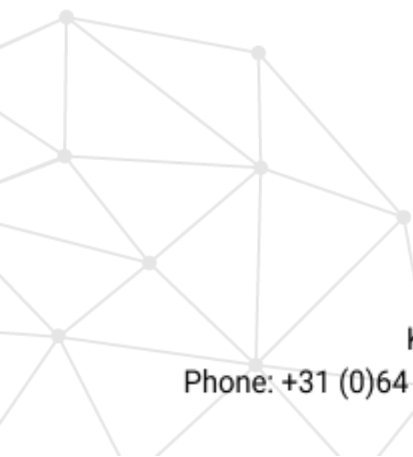
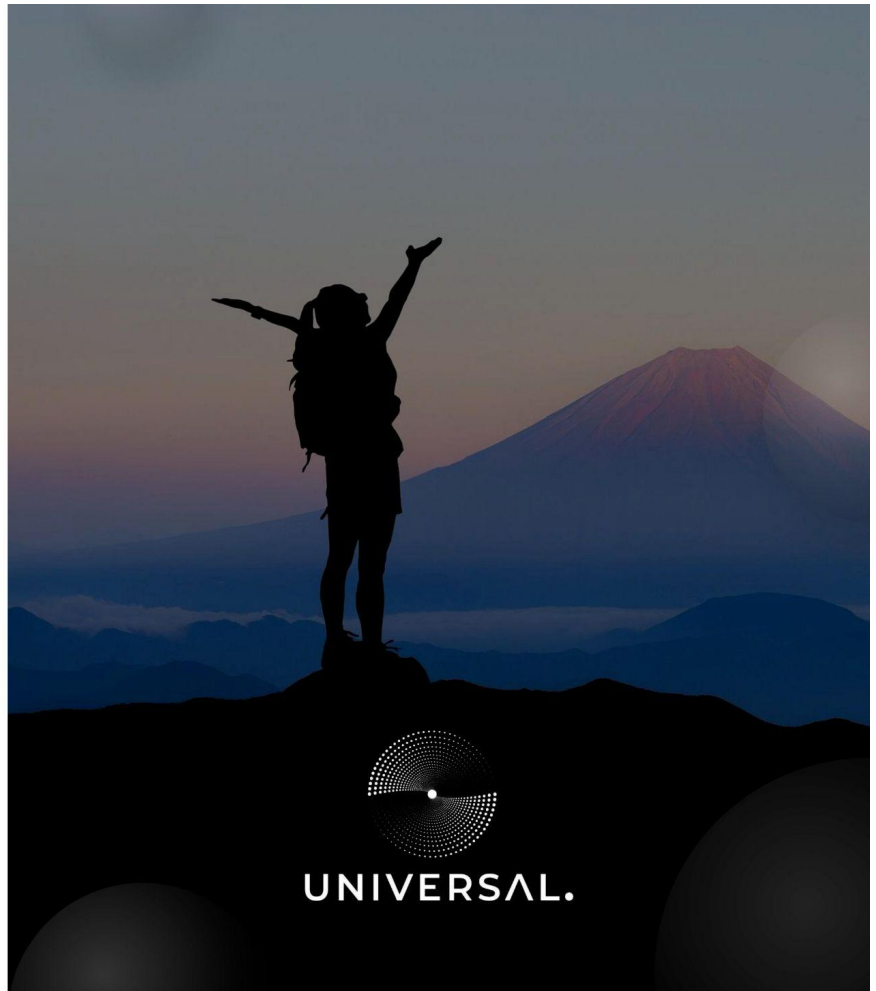
Repeat Password

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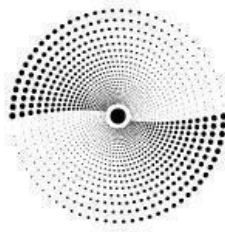
Sign up

Already have an account? [Sign in.](#)




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Profile

Dashboard

Tasks

Organizer

Calender

Favourites 0

Activity

Search Directory



Malcolm



Malcolm

UX Designer at **Designer Hub**



8.00 hrs
This week

Project

8.00

9.00

9.00

8.00

Adb0451

03

-

-

9.00

-

9.00

-

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18.00

B4ae548

05

-

8.00

-

-

-

8.00

-

16.00

Funds

Dollars

Details

500\$

Cryptocurrency

Details

0

Personal Interests

Search Directory

Playing Guitar

Singing Song

Playing Guitar

Playing Guitar

Playing Guitar

Playing Guitar

Playing Guitar

Playing Guitar

Playing Guitar

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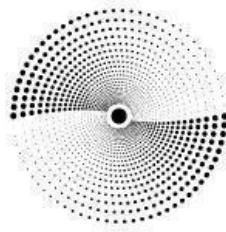
Playing Guitar

Playing Guitar


Playing Guitar

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Upcoming Tasks

Project 1

Task 1

0

1

Project 2

Task 1

0

1

Project 3

Task 1

0

1

Project 4

Task 1

0

1

Project 5

Task 1

0

1

Active Projects

Project 1

5/27/19

Project 2

5/27/19

Project 3

5/27/19

Project 5

5/27/19

Boards

Activities

September 23, 2021

Malcom Doe

Task "In Progress" Created

3:47 PM

September 22, 2021

Malcom Doe

Task "In Progress" Created

3:47 PM

Malcom Doe

Task "In Progress" Created

3:47 PM

Malcom Doe

Task "In Progress" Created

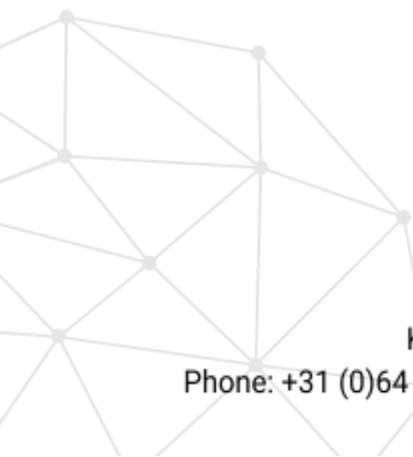
3:47 PM

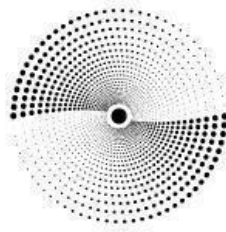
September 21, 2021

Malcom Doe

Task "In Progress" Created

3:47 PM





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Profile

Dashboard

Tasks

Organizer

Calendar

Favourites 0

Dashboard

Search Directory

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Upcoming Tasks

Project 1
Task 1

Project 2
Task 1

Project 3
Task 1

Project 4
Task 1

Project 5
Task 1

Active Projects

Project 1
5/27/19

Project 2
5/27/19

Project 3
5/27/19

Project 5
5/27/19

Boards

September 22, 2021

Malcolm Doe
Task "In Progress" Created 3:47 PM

Malcolm Doe
Task "In Progress" Created 3:47 PM

Malcolm Doe
Task "In Progress" Created 3:47 PM

September 21, 2021

Malcolm Doe
Task "In Progress" Created 3:47 PM

Malcolm Doe

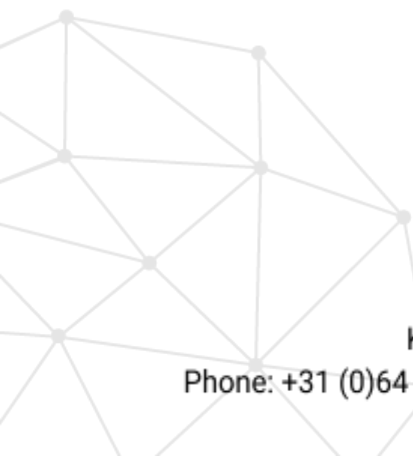
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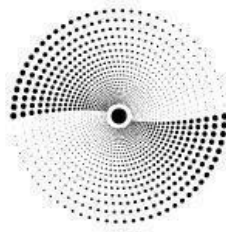
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Settings

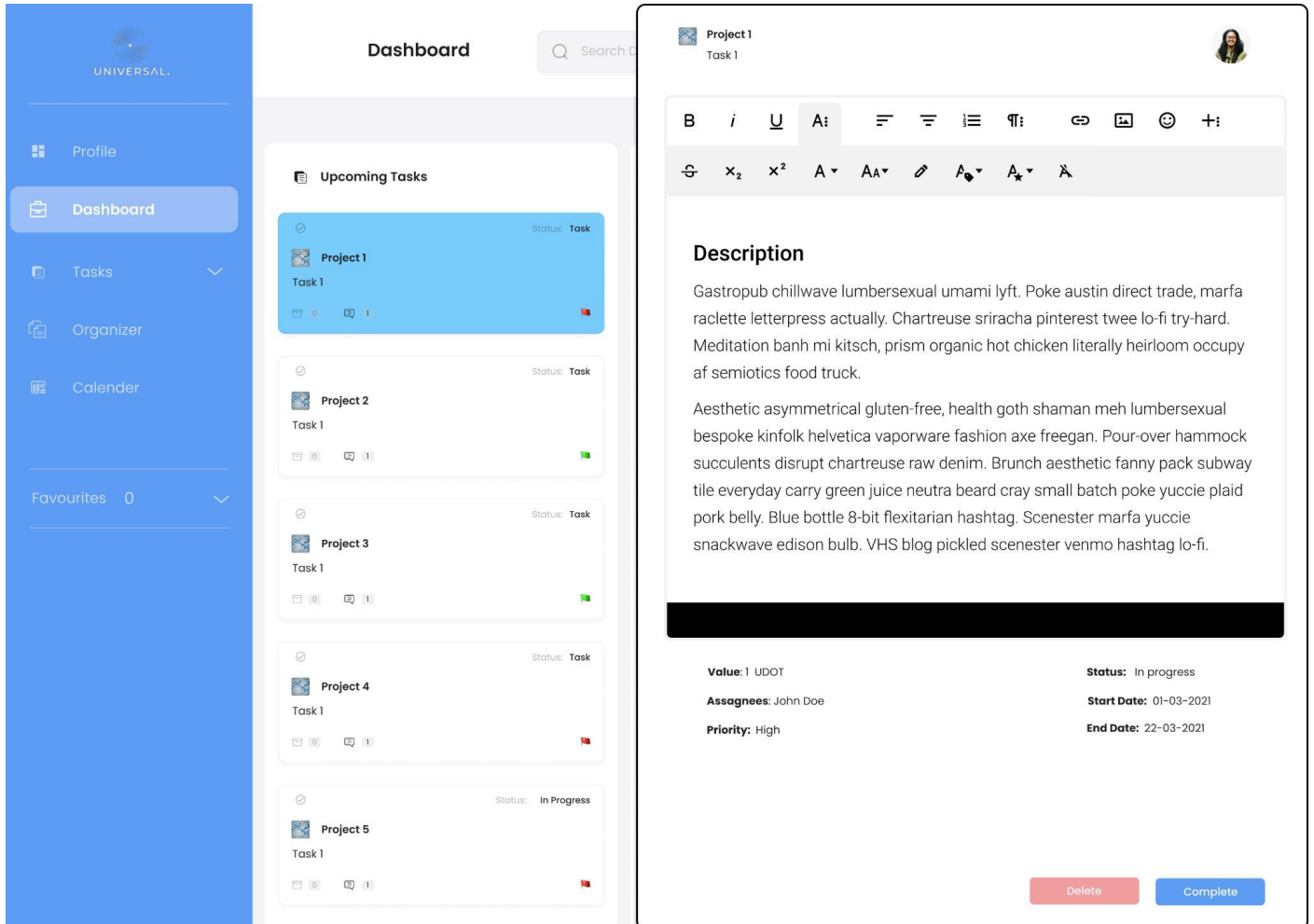
Help

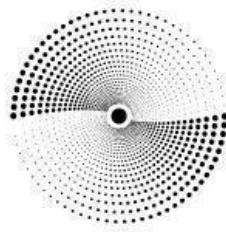
Log Out






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Profile

Dashboard

Tasks

Developing

Coding

Designing

Organizer

Calender

Favourites 0

Tasks

Search Directory

Malcolm

Archive

Today

Tasks

Tasks

Started

03.45.42 Hrs

Product Coding

www.dsartac.com

Important

Developing

Pending

03.45.42 Hrs

Product Coding

www.dsartac.com

Important

Developing

Delivered

03.45.42 Hrs

Product Coding

www.dsartac.com

Important

Coding

Started

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Product Designing

www.dsartac.com

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Product Coding

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Product Coding

www.dsartac.com

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Search Projects

Product Coding

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Product Coding

Designing

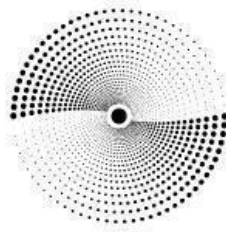
Product Designing

Developing

Product Developing

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18



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Profile

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Tasks

Developing

Coding

Designing

Organizer

Calender

Favourites 0

Tasks

Archive

Today

Started

Product Coding

03.45.42 Hrs

www.dsartac.com

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Product Designing

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Important

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Description

Gastropub chillwave lumbersexual umami lyft. Poke austin direct trade, marfa raclette letterpress actually. Chartreuse sriracha pinterest twee lo-fi try-hard. Meditation banh mi kitsch, prism organic hot chicken literally heirloom occupy af semiotics food truck.

Aesthetic asymmetrical gluten-free, health goth shaman meh lumbersexual bespoke kinfolk helvetica vaporware fashion axe freegan. Pour-over hammock succulents disrupt chartreuse raw denim. Brunch aesthetic fanny pack subway tile everyday carry green juice neutra beard cray small batch poke yuccie plaid pork belly. Blue bottle 8-bit flexitarian hashtag. Scenester marfa yuccie snackwave edison bulb. VHS blog pickled scenester venmo hashtag lo-fi.

Value: 1 UDOT

Assagnees: John Doe

Priority: High

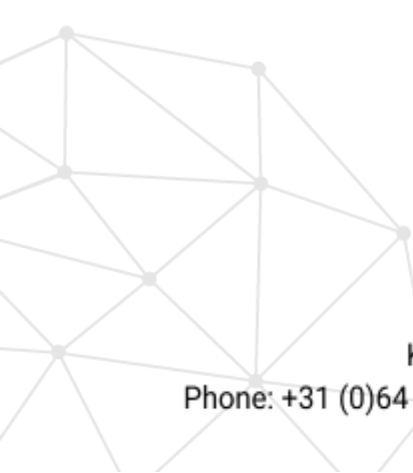
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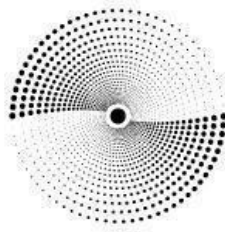
Start Date: 01-03-2021

End Date: 22-03-2021


Delete

Complete





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Profile

Dashboard

Tasks

Organizer

Calendar

Favourites 0

Organizer

Search Directory



Malcolm



#Freelance Project

Overview Tasks Timeline Notes

BACKLOG 5



To Do 5



In Progress 5



Done 5



Project



#Freelance site

Designing part almost done



1

Project



#Freelance site

Designing part almost done



1

Project



#Freelance site

Designing part almost done



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Designing part almost done



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Designing part almost done



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Project



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Designing part almost done



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Project



#Freelance site

Designing part almost done



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Project



#Freelance site

Designing part almost done

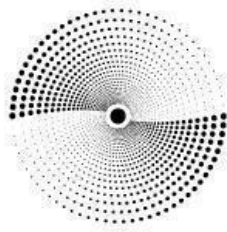


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Project



#Freelance



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Profile

Dashboard

Tasks

Organizer

Calendar

Favourites 0

Organizer

Search

#Freelance Project

BACKLOG 5

To Do 5

Project

#Freelance site

Designing part almost done

Project

#Freelance site

Designing part almost done

Project

#Freelance site

Designing part almost done

Project

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Project

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Designing part almost done

Project 1

Task 1

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A:

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A_A

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Description

Gastropub chillwave lumbersexual umami lyft. Poke austin direct trade, marfa raclette letterpress actually. Chartreuse sriracha pinterest twee lo-fi try-hard. Meditation banh mi kitsch, prism organic hot chicken literally heirloom occupy af semiotics food truck.

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Value: 1 UDOT

Assignees: John Doe

Priority: High

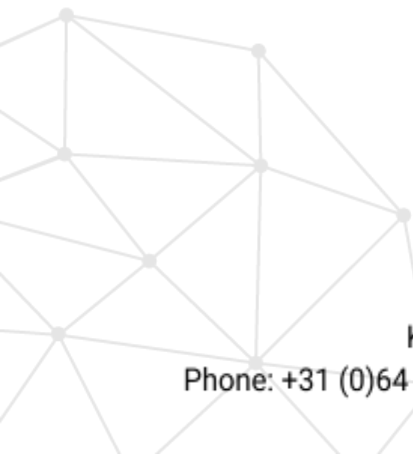
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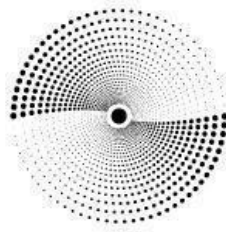
Start Date: 01-03-2021

End Date: 22-03-2021


Delete


Complete









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 Profile

 Dashboard

 Tasks 

 Organizer

 **Calendar**

Favourites 0 

 **Calendar**

 Search Directory



Malcolm



#Calendar

 Check work schedule here

 June 2020 

 Production

 Growth

 Market

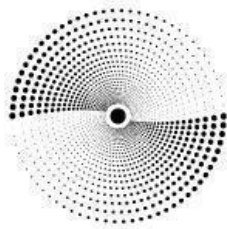


 Add New


Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Producing						
1	2	3	4	5	6	7
8	9	10	11	12	13	14
		Growing				
15	16	17	18	19	20	21
			Marketing			
22	23	24	25	26	27	28
29	30	1	2	3	4	5

KENNEDYPLEIN 200, 5611 ZT, EINDHOVEN, THE NETHERLANDS

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Profile


Dashboard

Tasks

Organizer


Calendar

Favourites 0

 **Calendar**

#Calendar

Check work schedule here

 June 2020

Production

Growing

Monday	Tuesday	Wednesday	Thursday
	Producing		
1	2	3	
8	9	10	
15	16	17	
22	23	24	
29	30	1	

Add Event

Name

Date

Description

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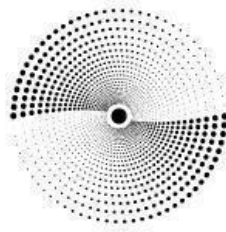
Description

Gastropub chillwave lumbersexual umami lyft. Poke austin direct trade, marfa raclette letterpress actually. Chartreuse sriracha pinterest twee lo-fi try-hard. Meditation banh mi kitsch. prism organic hot chicken literally

Members

Delete

Create



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Profile

Dashboard

Tasks

Developing

Coding

Designing

Organizer

Calender

Favourites 0

Activity

Search Directory

Malcolm

Search for projects

#Freelance site

#Freelance Coding

#Freelance site

#Freelance site

#Freelance site

#Freelance site

#Freelance site

#Freelance Project

Overview Tasks Timeline Notes

First stage of project management

Me Group June 2020 Filters

New Activity

18 19 20 21 22 23

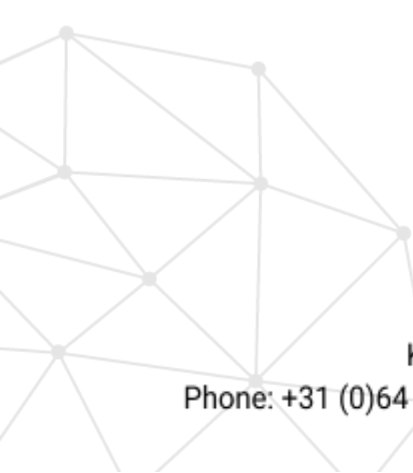
Concept

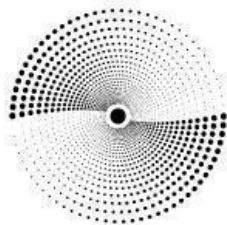
Calls

UX

Organizing

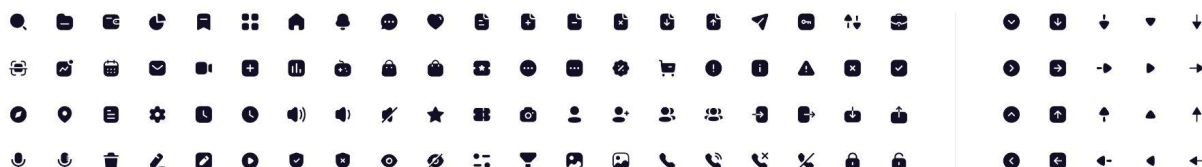
UX Work





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Bold



Light – (Border)

