# Team 07 Report Part I

Arshad Chati Calin Corcimaru Jack Humphrey Adam Hutton Rowan Murphy Thomas Woolhouse

November 2022

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Arshad Chati
Calin Corcimaru
Jack Humphrey
Adam Hutton
Rowan Murphy
Thomas Woolhouse
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### Contributions

#### **Arshad Chati**

- System Design
  - Login/Registration
    - \* Created Login and Registration designs on Figma as a basis for the rest of the team to begin implementing front-end elements.
  - Productivity Management Sub-system
    - \* Created designs for the productivity management sub-system including different views based on user rank, taking into consideration all features and functionalities and ensuring designs are available for them.
    - \* Designed all 'dashboards' and the kanban board used across the site which served as a starting point for further design by other team members during implementation.
  - Knowledge Management Sub-system
    - \* Designed the knowledge management sub-system with separate designs for the search page, results page, post page, edit post page and more.
  - Mobile Views
    - \* Designed basic mobile views as a template for the team to implement mobile first development to produce a more responsive site.
- Re-design based on client communications
  - Responsible for taking client feedback and re-working existing designs to meet their needs or replacing some designs entirely with new ones.
- Part One Presentation
  - Joint responsibility in creating the prototype presentation for the client.
  - Ensuring all relevant information is included, working on timing and ensuring information is kept concise yet informative.

#### Calin Corcimaru

- Requirements document
  - Gathered and documented the project's requirements from the specification letter and subsequent communications with Client representatives.
  - Delivered constant updates to the requirements document for maintaining current and adding new requirements.
- · Project page
  - Developed the Project page and its elements that dynamically displays information based on the Project id.
  - Implemented functionality that allows Managers to assign tasks to users when creating a new task.
  - Developed a filter that allowed the system to display tasks on the page based on User's rank.
- Client page
  - Modeled the Client page that dynamically displays all the client information based on the Client id.
- Communications with Client
  - Clarified requirements by sending messages and reminders to the Client.
  - Drafted some of the emails and messages that were then sent to the Client.
- Leadership
  - Coordinated the team (planning, task allocation, decision making, etc) during meetings and other channels of communications (WhatsApp, etc).
  - Ensured the team is on track with task progression and deadlines.

#### Jack Humphrey

- Communication with clients
  - Completed the majority of communication with the clients. This involved drafting questions, sending questions and updating our own document with our questions and the clients responses.

- User view page
  - Responsible for creating the user view page. This is a page for users to see information about other users in the system.
- User edit page
  - Responsible for creating the user edit page. This is a page for users to edit their own account information (such as password).
- Login page draft
  - Created an initial draft of the login page which was then reworked by Rowan.

#### Adam Hutton

- Created the Dashboard/Task view
  - Including the 'Kanban' section reused elsewhere
- Created the Manager's Dashboard
- Developed ways of displaying progress to the user, including the horizontal progress bar, and the 'spinner' one used in the project page
- Created the navigation, reworked it to work on mobile
- Created the base css used everywhere in the project
  - Including the card and title styles, navigation and ensuring that the designs are consistent and responsive throughout the website.
- Contributed to the requirements document, helping to reword/rewrite requirements to aid in conciseness and reduce ambiguity

## Rowan Murphy

- Built and developed Login and registration pages
  - Created the front of the registration page from scratch and expanded on Jacks' initial draft of the login page.
- Search and parts of search results page
  - Created the search page elements to be used over a number of pages.
  - Used these elements to make the pages responsive and easy to use. Positioned them accordingly to aid in design and the flow of the pages
- Checked through code and caught bugs and features that people missed
  - Proof reading code and caught some issues such as a button missing function
  - Also discovered bugs with certain elements of data usage etc.
- Partook in decisions regarding the project and creation of requirements
  - Assisted in creating the initial requirements draft to give a basis of what the project aimed to do
  - Provided opinions and feedback to make the best decisions when designing, creating and building the project as well as suggesting changes etc. to offer an alternative solutions and a different approach to problems in development where there were multiple viable answers.

#### Thomas Woolhouse

- Design the class diagram
  - Modelled the system as a diagram.
  - Modelled the system in JavaScript classes.
- Designed and created the API
  - Created a consistent API to be reused throughout the project and make webpage elements reactive.
  - Implemented a schemeless database.
  - Curated a custom serialistion system to allow for content parity between individual webpages.
- Login

- Developed functionality that enables the user to login and will stay logged in for the duration of the session.
- Additionally implemented the function to have the user log outfrom anywhere within the system.
- Also added functionality to keep track of the current logged-in user.

#### • Posts

- creating / editing / viewing posts.
- searching through posts.
- creating topics.
- integrate API md

#### • Other Contributions

- Ensuring the kanban on the dashboard and the project page are consistent.
- Coded the system for dividing a task into multiple subtasks.
- Integrated functionality allowing users to be assigned to task.
- Developed the code and interactivity to create clients within the system.
- Designed and created the ability to display an employees current workload on both the manager and project page.
- Contributed to teamates knowledge of both CSS and JavaScript, leading them to progress throughout more of the projectand supporting them in that.

# Requirements

Requirements are taken from the client specification letter unless stated otherwise.

## 1. Log in / Registration requirements.

- 1. A user **must** be able to login to the system using their work email and password.
- 2. The email address used for logging in must be using the @make-it-all.co.uk domain.
- 3. A user **must** be registered in order to log in to the system.

## 2. Registration Page Requirements & Registration Requirements.

- 1. The system **must** allow existing users to invite new users to register to the system using their work email.
- 2. A member of staff **must** be able to register only one account in the system.
- 3. The email address used for registering must be using the @make-it-all.co.uk domain.
- 4. The password used for registering **must** be at least 12 characters long and contain a combination of at least one uppercase letter, one lowercase letter, a number, and a special character (!@#\$%^&\*). <sup>1</sup>
- 5. A confirmation email **could** be sent out to the email address used for registration to check for a valid email. <sup>2</sup>

#### 3. User requirements

- 1. The system **must** allow a user to have at least one of the following roles: Employee, Team leader or Project Manager.
- 2. The system  ${\bf must}$  allow a user to have different permissions dependant on their currently assigned role.
- 3. A user **must** be able to be assigned to a project. <sup>4</sup>
- 4. A user **must** be able to work on any number of projects. <sup>5</sup>
- 5. A user **must** be able to create a private task for their private to-do list. <sup>6</sup>

#### 4. Team leader requirements

- 1. A team **must** have a team leader.
- 2. The system **must** allow any user to be a team leader. <sup>3</sup>
- 3. The system **must** allow a user to be a team leader for multiple projects. <sup>3</sup>
- 4. A team leader **must** be able to manage the members of their team (add, remove).<sup>3</sup>
- 5. A team leader **must** be able to assign tasks to users in their team. <sup>7</sup>
- 6. A team leader **must** be able to create tasks for a project they supervise. <sup>3</sup>
- 7. A team leader **must** be able to track task progress of a project.

#### 5. Project Manager requirements

- 1. A project manager **must** be able to manage all the projects in the system. <sup>3</sup>
- 2. A project manager **must** be able to add tasks to any current project. <sup>3</sup>
- 3. A project manager **must** be able to assign users to project tasks. <sup>3</sup>
- 4. A project manager **must** be able to create a new project. <sup>3</sup>
- 5. A project manager **must** be able to assign users to a team. <sup>3</sup>

<sup>&</sup>lt;sup>1</sup>04/11/2022 https://learn.lboro.ac.uk/mod/forum/discuss.php?d=358985

<sup>&</sup>lt;sup>2</sup>04/11/2022 https://learn.lboro.ac.uk/mod/forum/discuss.php?d=358983#p554513

 $<sup>^304/11/2022</sup>$  https://learn.lboro.ac.uk/mod/forum/discuss.php?d=355151#p554145

 $<sup>^422/10/2022\</sup> https://learn.lboro.ac.uk/mod/forum/discuss.php?d=355047$ 

 $<sup>^522/10/2022\</sup> https://learn.lboro.ac.uk/mod/forum/discuss.php?d=355049$ 

 $<sup>^622/10/2022</sup>$  https://learn.lboro.ac.uk/mod/forum/discuss.php?d=355053#p549541

 $<sup>^722/10/2022~</sup>https://learn.lboro.ac.uk/mod/forum/discuss.php?d=355075\#p549565$ 

#### 6. Productivity Management requirements

- 1. A user **must** also have access to their private to-do list that is not related to any Projects and is only viewable by that user. <sup>6</sup>
- 2. A user **must** have access to their personal dashboard, which will contain task they are assigned to from Projects they are working on and their own private todo list. A private todo list is a users personal to-do list which contains tasks that are not related to any Projects.
- 3. The board **must** have columns in the 'Kanban' view that tasks can be placed in. <sup>8</sup>
- 4. The system **should** allow users to switch between a Kanban and 'to-do list' view. <sup>8</sup>

#### 7. Task requirements

- 1. A task **must** have a name that will be displayed.
- 2. A task **should** have a description.
- 3. A task  $\mathbf{must}$  have a date for a deadline.  $^9$
- 4. A task **must** have an estimated number of worker-hours needed to complete the task.<sup>10</sup>
- 5. A task **should** have the option of being divided into smaller sub-tasks. A sub-task is a task, that the parent tasks depends on. <sup>10</sup>
- 6. If a task has sub-tasks, then its worker-hours **should** be calculated as a sum of the worker-hours of the smaller tasks.  $^{10}$
- 7. A task **must** be able to display the current state it is in. (To-Do, In Progress, Complete). <sup>10</sup>
- 8. A task with subtasks **should** display the percentage of sub-tasks that are completed. <sup>10</sup>
- 9. A task **should** be able to be categorized as either a Project-specific (select which Project) or private task (not related to any project). <sup>6</sup>
- 10. The system **should** allow a Project Manager/Team leader to modify and re-assign a Task. <sup>11</sup>
- 11. The system **could** allow a Sub-Task to be divided into multiple Sub-Tasks. <sup>10</sup>

## 8. Project requirements

- 1. A Project must have a title. <sup>12</sup>
- 2. A Project **should** have a description.
- 3. A Project must have a date for a deadline. 13
- 4. A Project must have a progress displayed, which is measured by the percentage of tasks completed. <sup>14</sup>
- 5. A Project **must** have a client. <sup>12</sup>
- 6. A Project **must** have a team assigned to it. <sup>4</sup>
- 7. The system **should** allow users to view the teams of their projects.

## 9. Project Manager dashboard

- 1. The project manager should be able to access and manage Project details from their dashboard. <sup>15</sup>
- 2. The project manager dashboard **should** allow the project manager to manage teams and users that are assigned to their Project.  $^{16}$

#### 10. Manager dashboard requirements

1. The manager dashboard **should** allow a team leader or project manager be able to see how many tasks a user currently has assigned.

 $<sup>^814/10/2022</sup>$  https://learn.lboro.ac.uk/mod/forum/discuss.php?d=356809

 $<sup>^{10}22/10/2022</sup>$  https://learn.lboro.ac.uk/mod/forum/discuss.php?d=355051#p549539

 $<sup>^{11}04/11/2022~</sup>https://learn.lboro.ac.uk/mod/forum/discuss.php?d=359721\#p554115$ 

 $<sup>^{12}22/10/2022\</sup> https://learn.lboro.ac.uk/mod/forum/discuss.php?d=355047\#p549501$ 

 $<sup>^{13}22/10/2022\</sup> https://learn.lboro.ac.uk/mod/forum/discuss.php?d=355067\#p549557$ 

 $<sup>^{14}22/10/2022~</sup>https://learn.lboro.ac.uk/mod/forum/discuss.php?d=355063\#p549553$ 

<sup>&</sup>lt;sup>15</sup>13/10/2022 https://learn.lboro.ac.uk/mod/forum/discuss.php?d=355039#p546189

 $<sup>^{16}22/10/2022~</sup>https://learn.lboro.ac.uk/mod/forum/discuss.php?d=355151\#p549485$ 

- 2. The Project tasks could be able to be filtered based on Project or team member assigned to it.
- 3. A Project **should** display whether it is sufficiently resourced. This is determined based on the sum of worker-hours required by its tasks, the number of workers assigned and the Project's deadline. <sup>17</sup>
- 4. The manager dashboard **could** display a warning to a Project Manager/Team Leader if the project is expected to fall behind the deadline, based on worker hours (see above)
- 5. A manager/team leader **could** be warned that a employee needs training if they are behind a deadline or having trouble working on a specific task. <sup>18</sup>

#### 11. Knowledge Management requirements

- 1. The system **must** allow a user to create a new post.
- 2. The knowledge management subsystem **must** have a search functionality where a User can search Posts by specific Topics. <sup>19</sup>
- 3. Posts **could** be viewable by all users by default. This option can be changed to be accessible only by an employee with certain permissions (Manager, Team lead, User).  $^{20}$
- 4. Posts **must** only be able to be edited by a Manager or the User who has created it. <sup>21</sup>
- 5. The subsystem **could** contain a FAQ page. <sup>19</sup>
- 6. The subsystem **should** offer users a way to contact author of post for specific questions. <sup>19</sup>
- 7. A Post **must** only have 1 topic assigned to it. <sup>22</sup>
- 8. The system **must** allow a Topic have multiple Posts. <sup>22</sup>

#### 12. Client requirements

- 1. A Client  ${f must}$  have key information including Company name, Client Representative, Office Address, and Contact Information.  $^{23}$
- 2. The system **must** allow a new client to be added.

## 13. System Requirements

- 1. The system **must** have a responsive design that will cater for different platforms and screen sizes.<sup>24</sup>
- 2. The system **must** be able to be accessed 24 hours a day.
- 3. A user **should** be directed to the employee dashboard after logging in.
- 4. The system **must** be accessed via a dedicated web address.
- 5. The system **must** follow the GDPR regulations.

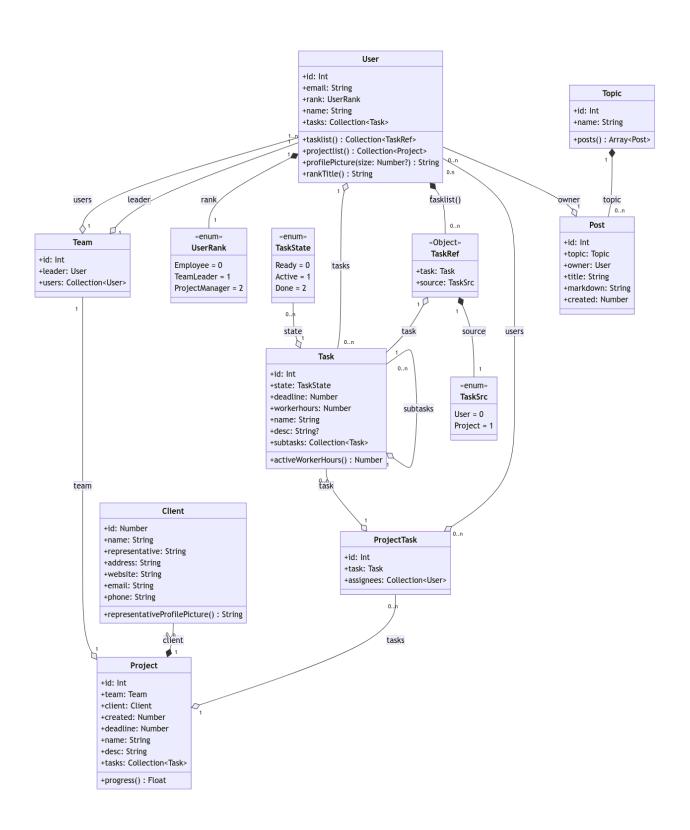
 $<sup>^{18}22/10/2022</sup>$  https://learn.lboro.ac.uk/mod/forum/discuss.php?d=355071#p549561

<sup>&</sup>lt;sup>19</sup>24/10/2022 https://learn.lboro.ac.uk/mod/forum/discuss.php?d=357789#p550055

 $<sup>^{21}22/10/2022\</sup> https://learn.lboro.ac.uk/mod/forum/discuss.php?d=355055\#p549545$ 

 $<sup>^{23}24/10/2022~</sup>https://learn.lboro.ac.uk/mod/forum/discuss.php?d=355047\#p550039$ 

<sup>&</sup>lt;sup>24</sup>11/10/2022 https://learn.lboro.ac.uk/mod/forum/discuss.php?d=355077#p545293



# Collection<T>

```
-snapshot: Array<T>
```

-onChangeFunc: CollectionEvent<T> => void

```
+Collection(...items: T)
```

+onChange(callback: CollectionEvent<T> => void): this

+onChangeRemove(callback: CollectionEvent<T> => void): this

+[Symbol.iterator]()

+add(...items: T): void

+addlf(transformer, ...items: T): void

+remove(...items: T): void

+replace(...items: T): void

-sync(func: void => void): void

onChange

# CollectionEvent<T>

+all: Array<T>

+add: Array<T>

+sub: Array<T>

#CollectionEvent(previous: Array<T>, next: Array<T>)