

# Project order

Project Motorcycle App

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FFHS

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# Project content and definition

## 1.1. Management Summary

In the CAS-course "Fortgeschrittene und Serverseitige Web-Technologien" a group project has to be planned and implemented. Thereby a homepage with several programming topics and technologies has to be created. The according requirements emerge after certain PVAs of the CAS-course.

The group has been created with Marc Kälin, Wiliam Isenring and Roger Abegg as the project team. After a quick brainstorming the project idea and objective has emerged to implement a motorcycle route planner homepage.

Due to the given fact that the requirements emerge from the different PVAs, the project is managed with the SCRUM-method.

## 1.2. Project mandate / project objectives

Development and implementation of a homepage based on html, css, javascript, .... . This includes the following objectives, which must be met by the time the first M365 product is implemented at the latest:

- Build up homepage (html, css)
- Introduce dynamical features (JS)
  - ...
  - .

## 1.3. In Scope

- Use of a NoSQL-Database (MongoDB)
- Provision of a REST interface in order to enable communication between client and server including the use of web sockets for server push use case
- Client and server must use modern JavaScript (ES6, Server Node.js)
- React is used for the front-end
- The application is dockerized
- The application must be deployed in the cloud and must be testable
- SCRUM-project approach

## 1.4. Out of Scope

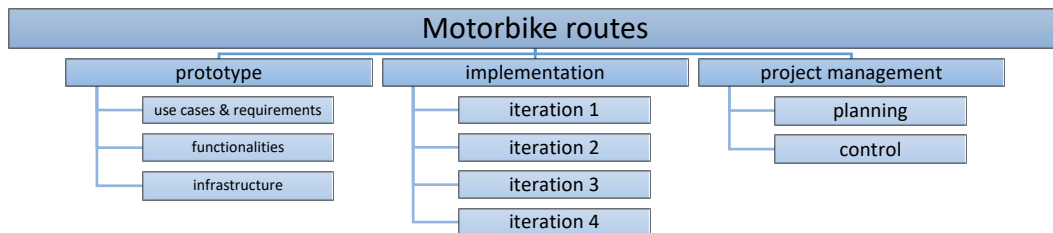
- Homepage made public
- Change Management (e.g. coaching, marketing) as no "real" customers are involved
- Project risks and business case
- No steering committee and official status reports
- For the sake of simplicity effort estimations for each deliverable are omitted

## 1.5. Assumptions

- ...

## 2. Project structure

### 2.1. Workbreakdown structure (WBS)



#### 2.1.1. Prototype: Use cases & requirements

##### Deliverables:

1. Basic use cases are elaborated
2. Flow chart for each use case is elaborated
3. Technical requirements are deducted

#### 2.1.2. Prototype: Functionalities

##### Deliverables:

1. Wireframe is defined
2. Mockup is defined

#### 2.1.3. Prototype: Infrastructure

##### Deliverables:

1. Technology stack is defined (e.g. sequence diagram, context diagram)
2. Infrastructure has been provided (e.g. git repository, mongo db,...)
3. access management has been elaborated

#### 2.1.4. Implementation - iteration 1 to 4

##### Deliverables:

1. Requirements are understood and corresponding tasks are created (Analysis)
2. Tasks are implemented resp. programmed (Construction)
3. Design is adapted and refined (Design)
4. Features are tested and reviewed regarding match with requirements (Testing)

### 2.1.5. Project management - planning

#### Deliverables:

1. Project objectives (objectives, scope, dependencies) are defined
2. Project organization is defined
3. Workbreakdown-structure is defined
4. Deliverables and work packages are assigned
5. Project plan is defined

### 2.1.6. Project management - control

#### Deliverables:

1. Project communication plan is elaborated and followed
2. Project status is continuously monitored. In case of deviations from the plan, measures are elaborated and implemented

## 2.2. Project timeplan

The project management approach is based on the SCRUM-method. The iterations are oriented on the FFHS-project tasks (P), which are given in the corresponding PVAs. Each iteration consists of the following tasks: (1) Requirements analysis and defer tasks, (2) Implement tasks, (3) Adapt and refine design, (4) Test implemented tasks and review whether requirements are fully met.

	% completed	Jan 21	Feb 21	Mar 21	Apr 21	May 21	Jun 21	Jul 21
Prototyping	0%							
Use cases + requirements	100%							
Functionalities	100%							
Infrastructure	80%							
Implementation	0%							
Iteration P2	0%							
Iteration P3	0%							
Iteration P4	0%							
Iteration P5	0%							
Iteration P6	0%							
Project management	0%							
Planning	80%							
Control	15%							

PVA12 PVA34 PVA56 PVA78 PVA910

## 2.3. Project communication plan

Meeting	Participants	Frequency	Meeting mode	Agenda
"Steering committee"	Orla Greevy, Marc Kälin, Roger Abegg, William Isenring	monthly	Feedback via moodle/mail	PVA requirements review and lessons learned

Scrum meetings	Marc Kälin, Wiliam Isenring, Roger Abegg	weekly	Skype	Completed tasks Open tasks Problems / questions
Individual team communication	Wiliam Isenring, Roger Abegg, Marc Kälin	individually	Whatsapp	Problems / questions / dependencies

## 3. Project documentation

### 3.1. Use Cases and requirements

#### 3.1.1. Basic Use Cases

- Register
- Login
- Logout
- Select Route Style (long: > 150km, short: < 150km; curvy or scenic)
- Contact Form
- (Add Bike)

##### 3.1.1.1. Register

- Click on "register"
- Form opens
- Form fields:
  - Username
  - E-Mailadress
  - Password (2x)
- User fills out required fields (all)
- User clicks on "sign up" Button
- User gets message "Your login has been successfully created"

##### 3.1.1.2. Login

- User clicks on "Login"
- Form Fields:
  - username/E-Mail
  - Password
- User fills out required fields (all)
- User clicks on "Login" Button
- If his account and password exist, he gets aNew Screen with new Options for logged in users
- The button Login changes to the tag "Logout"

##### 3.1.1.3. Logout

- User clicks on "logout"
- User gets a short message, that he is logged out and the button changes to "login"

#### 3.1.1.4. Select route style

- User chooses route type from drop-down menu
- User chooses location from drop-down menu
- User clicks on "get route" button
- The route will be displayed to the user according to his choices in the map iframe

#### 3.1.1.5. Contact form

- User navigates to contact form
- User fills out required fields (name and e-mailaddress)
- User fills out required message field (minimal of 50 characters)
- User clicks on "submit" button and receives a confirmation that his message has been sent

### 3.1.2. Flow charts

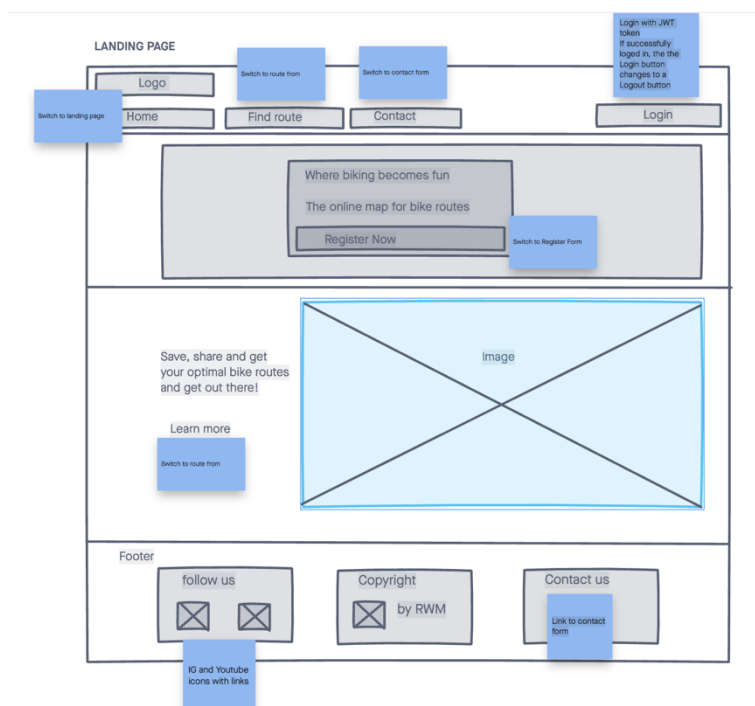
### 3.1.3. Technical Requirements

## 3.2. Functionalities

### 3.2.1. Wireframes

The homepage consists of three pages:

#### 1. Landingpage



When clicked on Login

The wireframe shows a login form overlay on the right side of the page. The overlay contains the following elements:

- A "Login" button at the top right of the overlay.
- An "email" input field.
- A "password" input field.
- A "Login" button below the input fields.
- The text "Not registered yet?" below the login button.
- A "Register" button at the bottom of the overlay.

The background page shows a navigation bar with "Logo", "Home", "Find route", "Contact", and "Login" buttons. The footer contains "follow us" with two social media icons, "Copyright by RWM" with a logo, and "Contact us".

## 2. Routesearch

- a. 2 routetypes (curvy, scenic)
- b. 2 locations (Luzern, Graubünden)

Route Planner Page

The wireframe shows the Route Planner Page layout. The navigation bar includes "Logo", "Home", "Find route", "Contact", and "Login" buttons. The main content area features:

- A large "Map" placeholder.
- A blue box labeled "Via Rest API" on the map.
- Two dropdown menus labeled "Choose your route type" and "Choose your location".
- A "Get route" button.
- A blue box labeled "Map will be proposed" next to the "Get route" button.

The footer contains "follow us" with two social media icons, "Copyright by RWM" with a logo, and "Contact us".

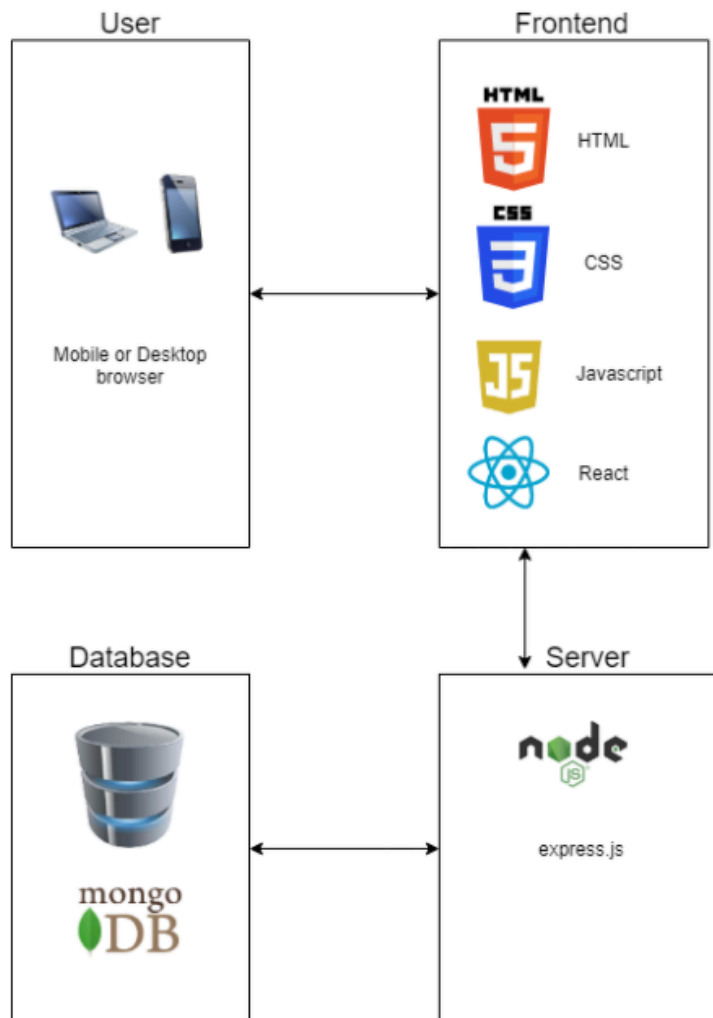
## 3. Contact form



The mockup shows a web page layout for a contact form. At the top, there is a navigation bar with a 'Logo' placeholder on the left and four buttons: 'Home', 'Find route', 'Contact', and 'Login'. The main content area is titled 'contact us' and contains three input fields: 'Name', 'Mail address', and 'Your message' (a larger text area). Below these fields is a 'Submit' button. A blue feedback box on the left of the button contains the text: 'Message will be sent, confirmation will be displayed'. The footer section, labeled 'Footer', contains three boxes: 'follow us' with two social media icons, 'Copyright by RWM' with a logo, and a 'Contact us' button.

### 3.2.2. Mockups

### 3.3. Infrastructure



### 3.4. Iteration 1

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