P L A N
Software solution for Media Bazaar

ICT & Software Engineering - Semester 2
Class: S2-CB-01
Group: 4
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Introduction to the problem / assignment

1. **Client**

   The client is Michiel Koehorst who represents the company MediaBazaar (daughter company of Jupiter), which is a hardware shop that is going to open its first shop in Eindhoven. Three meetings with the client are going to be conducted, in which he is going to present what their company needs and give the team feedback on what have been done. If needed, the client is accessible via email (m.koehorst@fontys.nl).

2. **Team**

   The name of the team is BulCari and it consists of four people (Tony Jiang, Stoycho Stoychev, Veronika Valeva and Stela Trencheva). Our team consists of one Caribbean and three Bulgarians. Although there is not a large range of nationalities, team members are ready to share not only coding experience but also personal and cultural skills. The team can be accessed via email (bulcari@gmail.com).

3. **Current situation**

   A new hardware store "Media Bazaar" is opening their first shop in Eindhoven. Funded by the parent company "Jupiter", they intend to start as well prepared as possible. They have been facing problems with managing and tracking employees and stock and their priority is on these points, but employees' administration is even more important. These problems are due to the fact that they are doing everything manually at the moment. They are using online calendars and excel sheets, but they found them too detailed and unreliable. That is why they need a team of software developers to build a brand new application for them.

   There are competitors working on similar solution and after the first phase of the project (week 6) the client is going to decide if the team is going to continue working on it. That is why the team should strive for delivering a solution that best suits the need of the client.

4. **Problem description**

   The biggest challenge that Media Bazaar's management foresees is managing and keeping track of their employees and products. They also have difficulties assigning shifts to employees and viewing them for the whole store and per person.

5. **Project goal**

   The project goal is to help Media Bazaar create an efficient way for their employees to add / remove employees, keep track of the attendance of employees, assign work shifts,

manage depot, see shelf restock requests and view statistics, using IT solutions! In the planning, you can find all the deliverables required for the successful software solution.

6. Deliverables

1. In the first 6 weeks of the project, the team will deliver:
    - Windows Form Application
    - Documents describing it and the process of creation (Project plan, URS, Report)
    - Functionalities such as:
        - Login
        - User information and edit profile
        - Managing employees (adding / removing employees/change contract)
        - Assigning shifts to employees/ see weekly schedule
        - Statistics about employees / products
        - Adding and removing products
        - Product data
        - Change password
        - Database

2. In the second 6 weeks of the project, the team will deliver:
    - Updated Windows Form Application
    - Documents describing it and the process of creation (Project plan, URS, Report)
    - Website
    - Functionalities such as:
        - Creating departments and assigning managers to them
        - Cashier app used by the cashiers of the company to track sold products
        - Contract history of employees
        - Website for employees of the company where they will be able to:
            - Login
            - View and edit personal information
            - View schedule (only store/stock workers)
            - Mark availability (only store/stock workers)

7. Constraints

- Windows Form Application
- Programming language - C#
- Sharing code between team members – Gitlab
- Not needed to buy or get external sources to run the project
- Important deadlines for the project –

    - Week 6
    - Week 12
    - Week 18
- Number of meetings with the tutor - two each week, which leads to limited feedback times
- Number of meetings with the client - only three for the whole project
- Not much detailed information provided - can lead to not delivering the software that best satisfies the needs of the client.

Phasing

Phase 1: First version of the application

Milestone 1: Week 6

Week One

Work for the week:

Activity name:	Forming a group/Project plan	**Delivery date:**	12.02.2021(Friday)
Input:	N/A		
Budget:	16/h per person		
Activities:			
○ Create a group of four people. ○ Make a repository. ○ Come up with questions for the client. ○ Interview the client. ○ Make a project plan. ○ Assign group members with different responsibilities. ○ Make a project report document.			
Responsibility:			
○ Stoycho – Create a git repository. Write the agenda before every meeting. ○ Tony – Speak with the client ○ Stela – Work on the project plan. Write decisions after every meeting. ○ Veronika – Start the report documentation. Work on the project plan.			
Output:	PRJ-CB01 – Group 4 Git repository - https://git.fhict.nl/I467491/s-cb-s2-cmk-group-4.git Project plan Report Group name and logo		

- Self-check at the end of the week – Check the work done / Check the unfinished processes

Week Two

Work for the week:

Activity name:	URS	**Delivery date:**	26.02.2021(Friday)
Input:	Project plan/Tutor feedback Client's requirements		
Budget:	16/h per person		
Activities:			
○ Improve the project plan. (if needed) ○ Create sketches and wireframes for the application. ○ Create a logo for the application. ○ Working on the user requirements specifications.			
Responsibility:			
○ Stoycho – Start with UML diagram, URS ○ Tony – URS ○ Stela – Come up with a logo. Work on wireframe. URS ○ Veronika – Work on sketches. URS			
Output:	Sketches Wireframe Project logo		

- Self-check at the end of the week – Check the work done / Check the unfinished processes

Week Three

Work for the week:

Activity name:	Implementation	**Delivery date:**	05.03.2021(Friday)
Input:	Tutor feedback Sketches Wireframe Project logo Tutor feedback.		
Budget:	16/h per person		
Activities:			
○ UML diagram ○ Create a log in functionality. ○ Create a profile pages for every kind of user. ○ Implement classes and create objects (HR admin, management, depot-workers, employees) ○ Create product class. ○ Database connection.			
Responsibility:			
○ Stoycho – UML, Create a log in functionality. Database connection. ○ Tony – UML, Create a profile pages for every kind of user. Create product class. ○ Stela – UML, Implement classes and create objects (HR admin, management, depot-workers, employees) ○ Veronika – UML, Implement classes and create objects (HR admin, management, depot-workers, employees)			
Output:	UML diagram Log in Profile pages Implemented classes and objects (HR admin, management, depot-workers, employees)		

- Self-check at the end of the week – Check the work done / Check the unfinished processes.

Week Four

Work for the week:

Activity name:	Implementation	**Delivery date:**	12.03.2021(Friday)
Input:	Log in Profile pages Implemented classes and objects (HR admin, management, depot-workers, employees) Tutor feedback.		
Budget:	16/h per person		
Activities:			
○ Create employee statistics. (management) ○ Create the functionality of assigning shifts to employees. (administration) ○ Create the pages for managing employee profiles.(adding / removing) (administration) ○ Create product data(stock worker). ○ Create product statistic(store manager). ○ Add and remove product(stock manager). ○ Database managing			
Responsibility:			
○ Stoycho – Database/Selecting, Adding, Updating, Deleting/ ○ Tony – Create product data(stock worker). Create product statistic. Add and remove product(stock manager). ○ Stela – Create the functionality of assigning shifts to employees. (administration) ○ Veronika – Create the pages for managing employee profiles.(adding / removing) (administration). Create employee statistics. (management)			
Output:	Employee statistics Functionality of assigning shifts to employees Pages for managing employee profiles		

- Self-check at the end of the week – Check the work done / Check the unfinished processes.

Week Five

Work for the week:

Activity name:	Testing/Implementation	**Delivery date:**	19.03.2021(Friday)
Input:	Stock statistics Employee statistics Functionality of assigning shifts to employees Pages for managing employee profiles Tutor feedback.		
Budget:	16/h per person		
Activities:			
○ Create a test plan. ○ Send test plan to peers. ○ Create a report with the results from the user testing. ○ Work on any unfinished work from past weeks concerning the implementation of the code. (if any)			
Responsibility:			
○ Stoycho – Work on any unfinished work from past weeks concerning the implementation of the code. Fix weak parts of the code. Send test plan to peers ○ Tony – Create a test plan. Add test case part in the test plan. ○ Stela – Add test case part in the test plan. ○ Veronika – Create a report with the results from the user testing. Add test case part in the test plan			
Output:	Test plan User testing / Report		

- Self-check at the end of the week – Check the work done / Check the unfinished processes.

Week Six

Work for the week:

Activity name:	Software presentation	**Delivery date:**	26.03.2021(Friday)
Input:	User testing / Report Initial version of the application – finished Report documentation Tutor feedback.		
Budget:	16/h per person		
Activities:			
○ Create a presentation. ○ Finish the report documentation. ○ Present the final version of the application.			
Responsibility:			
○ Stoycho – Present the final version of the application. ○ Tony – Present the final version of the application. ○ Stela – Create a presentation. ○ Veronika – Finish the report documentation			
Output:			

- Self-check at the end of the week – Check the work done / Check the unfinished processes.

Phase 2: Second version of the application

Milestone 1: Week 12

Week Seven

Work for the week:

Activity name:	Refactoring	**Delivery date:**	02.04.2021(Friday)
Input:	Initial version of the application Client feedback Tutor feedback.		
Budget:	13/h per person		
Activities:			
○ Update UML ○ Refactor GUI for statistics ○ Refactor structure of application files			
Responsibility:			
○ Stoycho – Refactor structure of application files ○ Tony – Update UML ○ Stela – Update UML, refactor GUI for schedule ○ Veronika – Refactor GUI for statistics, Update UML, individual employee statistics			
Output:	Updated GUI (employee statistics, schedule) UML Showing statistics for specific employees		

- Self-check at the end of the week – Check the work done / Check the unfinished processes.

Week Eight

Work for the week:

Activity name:	Refactoring	**Delivery date:**	09.04.2021(Friday)
Input:	UML GUI refactor (employee statistics, schedule) Showing statistics for specific employees		
Budget:	13/h per person		
Activities:			
○ Refactor GUI and code quality			
Responsibility:			
○ Stoycho – Refactor employee info GUI ○ Tony – Refactor product GUI ○ Stela – Refactor schedule code and GUI ○ Veronika – Refactor overall employee statistics			
Output:	Updated GUI and code		

- Self-check at the end of the week – Check the work done / Check the unfinished processes.

Week Nine

Work for the week:

Activity name:	Refactoring	**Delivery date:**	16.04.2021(Friday)
Input:	Updated GUI and code		
Budget:	16/h per person		
Activities:			
○ Refactor GUI and code quality ○ Department functionality			
Responsibility:			
○ Stoycho – Employee info code and GUI refactor ○ Tony – Add department functionality ○ Stela – Refactor schedule code and change the way of assigning employees ○ Veronika – Refactor employee statistics code			
Output:	Updated GUI and code Part of department functionality		

- Self-check at the end of the week – Check the work done / Check the unfinished processes.

Week Ten

Work for the week:

Activity name:	Refactoring	**Delivery date:**	23.04.2021 (Friday)
Input:	Updated GUI and code Part of department functionality Client feedback		
Budget:	16/h per person		
Activities:			
○ Refactor GUI and code quality ○ Department functionality ○ Contract history and change contract			
Responsibility:			
○ Stoycho – Contract history and change contract GUI ○ Tony – Refactor department functionality ○ Stela – View schedule per week GUI and code quality ○ Veronika – Refactor employee statistics code			
Output:	Updated GUI and code Part of department functionality Part of contract history		

- Self-check at the end of the week – Check the work done / Check the unfinished processes.

Week Eleven

Work for the week:

Activity name:	Implementation	**Delivery date:**	30.04.2021(Friday)
Input:	Updated GUI and code Part of department functionality Part of contract history		
Budget:	13/h per person		
Activities:			
○ Cashier app ○ Department functionality ○ Website (Login page, Profile page, Schedule display, Availability marking)			
Responsibility:			
○ Stoycho – Cashier app ○ Tony – Department functionality ○ Stela – Website schedule display, availability marking and refactor schedule in application ○ Veronika – Website login and profile fuctionality			
Output:	Cashier app GUI Part of department functionality Website (Login page, Profile page, Schedule display, Availability marking)		

- Self-check at the end of the week – Check the work done / Check the unfinished processes.

Week Twelve

Work for the week:

Activity name:	Implementation	**Delivery date:**	12.04.2021(Wednesday)
Input:	Cashier app GUI Part of department functionality Website (Login page, Profile page, Schedule display, Availability marking)		
Budget:	9/h per person		
Activities:			
○ Cashier app ○ Department functionality finished ○ Website (Edit profile) and publish ○ Update documentation			
Responsibility:			
○ Stoycho – Cashier app ○ Tony – Department functionality and URS document update ○ Stela – Website availability design refactor, project plan update and connect schedule with department ○ Veronika – Website edit profile and connect employee statistics with department			
Output:	Cashier app Department functionality Website (Edit profile) Updated documents Schedule and employee statistics per department		

- Self-check at the end of the week – Check the work done / Check the unfinished processes.