**Group Members:**

Tyler Agostinho 4080041

Aleks Petrov 4007794

Georgi Dimitrov 3996891

Pedzisai Mutiti 3824635

**Tutor:** Andre Postma

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# Revision Table:

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| --- | --- | --- |
| **Date modified** | **Version of Document** | **Changes Made** |
| 12 September 2020 | Version 0.1 | * None |
| 17 September 2020 | Version 0.2 | * Reworked Use Cases * Updated GUI (Added missing buttons) |
| 19 September 2020 | Version 0.3 | * Added table for features (MSWC) * Reworked Use Cases |
| 25 September 2020 | Version 0.4 | * Reviewed and added to Table of features. * Added use cases * Reviewed comments on GUI |
| 25 October 2020 | Version 0.5 | * Added Information about Iteration 1 (Website) * Added Use Cases for Website * Added GUI for Website |
| 21 November 2020 | Version 0.6 | * Added Information about Iteration 2 * Added Use Cases for Stock Manager * Added GUI for Stock Manager |
| 22 December 2020 | Version 0.7 | * Added Information about Iteration 3 * Added GUI for Automated Scheduling |
| 14 January 2021 | Version 0.8 | * Added Information about Iteration 4 * Updated all GUI to represent Final Version |

# Agreements with Client:

**Waterfall Phase:**

The client would like us to create a software solution that, will for now , help the administrator keep track of data and scheduling regarding employees in their new store. The first phase of the project includes creating a software solution for the administration department. This solution must include keeping track of employees’ data and scheduling regarding their new store.

**Iteration Phase:**

Iteration 1 will revolve around the creation of the website. The website allows the employees to view their current personal details on the system. Employees should be able to update data that has changed so that their information is updated at all times. Employees will also be able to view their current and future schedules ( 1 week in advance ). There will also be some changes made to the C# application where the client sees fit.

Iteration 2 will focus on a stock management section of the business. We will be providing a software solution that allows the Managers to request more stock for the stock depo as well as provide statistics that will aid them in the management and running of the store. This will make the Managers work more efficiently as well as provide the mangers with insights into the business that they might not have had access to before.

Iteration 3 will focus on the automated scheduling of employees. We will create an algorithm that will be able to take in certain criteria discussed with the client. Some of these include “worker availability” and “staff threshold” into account before applying a new schedule to the selected days. The user will also be prompted to input the week that the schedule should be made for and how many members of each department is required. We also added a call in sick feature that allows employees to call in sick so that the administration can in real time fix or correct any scheduling shortcomings due to the employee calling in sick.

Iteration 4 allows us to polish the final version of the deliverables and add extra features to the existing program.

# Functional Requirements: (Administration of Employees)

Currently the software solution will only entail the administration department and their process regarding employees. The administration department requires the software solution to do the following:

AdminR01: Signing into the system with Unique name and password

AdminR02: Creating an employee

AdminR03: Deleting an employee

AdminR04: Editing employee details

AdminR05: Creating a schedule

AdminR06: Viewing a schedule

AdminR07: Updating schedules

AdminR08: Deleting a schedule

AdminR09: Signing out of the system

AdminR10: Automated scheduling

*The following table represents the tasks we as a group are choosing to focus on.*

|  |  |  |
| --- | --- | --- |
| **Section:** | **Features:** | |
| Must | AdminR01: Signing into the system with Unique name and password  AdminR02: Creating an employee.  AdminR03: Deleting an employee.  AdminR04: Editing employee details.  AdminR05: Creating a schedule.  AdminR06: Viewing a schedule.  AdminR07: Updating schedules.  AdminR09: Signing out of the system.  AdminR10: Automated scheduling |
| Should | AdminR07: Updating schedules.  AdminR08: Deleting a schedule. |
| Could | None |
| Won’t | None |

# 

# Functional Requirements: ( Website for Employees )

These requirements will apply to the new website we will be creating for Media Bezaar. Employees will be able to Login with Unique credentials. This will allow them to access a page that shows them their personal details along with their current and upcoming work schedule.

WebR01: Signing into the system with Unique name and password

WebR02: Changing Password on 1st Login

WebR03: Viewing of personal details

WebR04: Editing of personal details

WebR05: Viewing a schedule

WebR06: Informing Administration of Possible scheduling conflicts

WebR07: Signing out of the system

WebR08: Calling in sick

WebR09: Choosing preferred shift timeslots for individual workdays

*The following table represents the tasks we as a group are choosing to focus on.*

|  |  |
| --- | --- |
| **Section:** | **Features:** |
| Must | WebR01: Signing into the system with Unique name and password  WebR03: Viewing of personal details  WebR04: Editing of personal details  WebR05: Viewing a schedule  WebR07: Signing out of the system  WebR09: Choosing preferred shift timeslots for individual work days |
| Should | WebR02: Changing Password on 1st Login  WebR06: Informing Administration of Possible scheduling conflicts |
| Could | None |
| Won’t | None |

# Use Cases: Administration of Employees

**Use Case AdminR01: Signing in**

Actor: Administrator

Preconditions: User must an authorized administrator

Main Scenario: The administrator should input the appropriate details (name and password) before being allowed access into the system. Once they are logged on, they have the control do carry out the basic tasks provided by the system.

Alternative Outcomes 1: User inputs wrong credentials

a) User makes a second attempt to sign in

b) End of use case

**Use Case AdminR02: Creating a new employee**

Actor: Administrator

Preconditions: User must have permission to add new employees hence they must have administrator permissions.

Main success scenario:

1. Request to create a new employee
2. System requests for new employee information
3. Administrator fills in all the required information about the new employee and submits these details
4. System shows overview information about the newly created employee
5. Confirmation that a new employee has been added to the system.

Alternative Outcomes: User is not an Administrator

1a. Sign in request denied

End of Use case

Post Conditions: New employee successfully added to the system

**Use Case AdminR03: Deleting an employee**

Actor: Administrator

Preconditions: User must have permission to add new employees hence they must have administrator permissions.

Main success scenario:

1. Confirm that intended action is to delete an existing employee from the system
2. System requests for final confirmation to delete the selected employee
3. System confirms removal of employee

Alternative Outcomes 1: User is not an Administrator

1. Sign in request denied

Post Conditions: Employee deleted from the system

**Use Case AdminR04: Editing employee details**

Actor: Administrator

Preconditions: User must have permission to add new employees hence they must have administrator permissions.

Main success scenario:

1. Administrator selects to edit employee information for a particular employee
2. Administrator updates whatever information he intends to change
3. Confirms updated info
4. System shows employee information with the new updated information
5. Administrator confirms new information.

Post Conditions: Employee details updated/edited

Alternative Outcome 1) User is not an administrator

1. Sign in request denied
2. End of use case

Alternative outcome 2) Wrong login credentials

a) Attempt to login again

b) End of use case

**Use Case AdminR05: Create a schedule**

Actor: Administrator

Preconditions: User must be an administrator

Main success scenario:

1. Request to create a schedule for a particular employee or employees
2. Assign relevant information about the employee schedule (Department, Time slot to be worked)
3. Administrator confirms information to the system

Post Conditions: Working schedule created for a specific employee or more

Alternative Outcome 1: User is not an administrator

1. Sign in request denied
2. End of use case

Alternative Outcome 3a: Clashes in the schedule

1. Reassign employees to free time slots
2. End of Use case

**Use Case AdminR06: Viewing Schedules**

Actor: Administrator

Preconditions: User must be an administrator

Main Scenario: The administrator should be able to view the current schedule of an employee. The data shown will be that of the department the employee belongs to and the time slot they will be working in.

Post Conditions: Employee schedule information can be viewed.

Alternative Outcomes 1: User is not an administrator

1. Sign in request denied
2. End of use case

**Use Case AdminR07: Updating schedules**

Actor: Administrator

Preconditions: User must be an administrator

Main Scenario: The administrator should be able to make a change to an existing employee’s schedule. The changes vary between a change in department or a change in the time slot or both.

Post Conditions: Employee schedule information successfully changed

Alternative Outcomes 1: User is not an administrator

1. Sign in request denied
2. End of use case

**Use Case AdminR08: Deleting a schedule**

Actor: Administrator

Preconditions: User must be an administrator

Main success scenario:

1. Select the schedule or schedules intended to be deleted
2. Confirm to the system that your intention is to delete a particular schedule (button)

Alternative Outcomes 3: Schedule is still active or has not been worked

1. Reselects inactive schedules that are no longer required
2. End of use case

Post Conditions: Working schedule for one or more employees has been deleted from the system.

**Use Case AdminR09: Signing out**

Actor: Administrator

Preconditions: User must an authorized administrator

Main Scenario: The administrator must be able to exit the system once they have completed their tasks that they logged on to do in the first place. This action will terminate the connection between the administrator and system.  
End of use case.

Use Cases: Website for Employees

**Use Case WebR01: Signing into the system with Unique name and password**

Actor: Employee

Preconditions: User must be an employee in the database.

(Created by the Administration department)

Main Scenario:

1. The Employee should input the appropriate details (name and password) before being allowed access into the system.
2. Allowed to enter application.

Alternative Outcomes 1: User inputs wrong credentials

a) User makes a second attempt to sign in

b) End of use case

**Use Case WebR02: Changing Password on 1st Login**

Actor: Employee

Preconditions: User must be an employee in the database (created by the Administration department) and this must be their first-time logging into the system.

Main Scenario:

1. The Employee should input the appropriate details (name and password) before being allowed access into the system.
2. The system will prompt them to change their password and confirm their new password. The system will then redirect the employee to the homepage of the website where they will be logged in.
3. System saves new password to database.
4. Once they are logged in, they have the control to view information available to them provided by the system.

Alternative Outcomes 1: New Password does not match Confirmation Password

1. Employee prompted to enter new password and confirmation password again.
2. End of use case.

**Use Case WebR03: Viewing of personal details**

Actor: Employee

Preconditions: User must be logged into the website.

Main Scenario:

1. The Employee is able to view the personal information.
2. End of use case

**Use Case WebR04: Editing of personal details**

Actor: Employee

Preconditions: User must be logged into the website.

Main Scenario:

1. The Employee is able to view the personal information.
2. Employee clicks the edit button
3. Edits the text field holding the information
4. Employee confirms to save the newly edited information.
5. System updates user information and page is refreshed.
6. Users new information is now shown on screen.
7. End of use case

Alternative Outcomes 1:

1. Wrong data is entered
2. Ystem prompts user
3. User changes wrong data
4. System saves new data
5. End of use case

**Use Case WebR05: Viewing a schedule**

Actor: Employee

Preconditions: User must be logged into the website.

Main Scenario:

1. The employee can view their current schedule for the day.
2. The employee can change to the weekly overview screen to show the schedule for the whole week.
3. End of use case.

Alternative Outcomes 1: No Schedule can be seen.

1. Contact your administrator.
2. End of use case.

**Use Case WebR06: Informing Administration of Possible scheduling conflicts**

Actor: Employee

Preconditions: User must be logged into the website and have a schedule.

Main Scenario:

1. The employee can view their current schedule for the day.
2. The employee can contact the administrator to send a log about a possible upcoming scheduling conflict.
3. End of use case.

**Use Case WebR07**: **Signing out of the system**

Actor: Employee

Preconditions: User must be logged into the website.

Main Scenario:

1. The employee clicks the logout button and is then logged out of the system.
2. End of use case.

**Use Case WebR08: Calling in sick**

Actor: Employee

Preconditions: User must be logged into the website.

Main Scenario:

1. The employee clicks “Call in sick”
2. System notifies the Administrator
3. End of use case.

**Use Case WebR09: Choosing preferred shift timeslots for individual workdays:**

Actor: Employee

Preconditions: User must be logged into the website.

Main Scenario:

1. The employee clicks “User settings”
2. The employee then clicks drop down box containing possible shifts.
3. System saves proffered shifts for employee.
4. End of use case.

# GUI: C# Application

Graphical user interface, application

Description automatically generated  
  
Login Page: User must enter the user specific credentials.

Graphical user interface, text

Description automatically generated

Dashboard Page: This is the home page that the user sees when entering the application. On this page you are able to see the schedule of the day by default.   
  
  
Graphical user interface

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Admin Main Page: View all administrators.

Graphical user interface

Description automatically generated

Add Admin: Adds a new administrator to the system.  
  
  
  
Graphical user interface

Description automatically generated

Edit Admin: Allows the user to edit permissions of other employees.

Graphical user interface

Description automatically generated with medium confidence  
  
Employee Main Page: This screen provides an overview of the current employees working for the company.

Graphical user interface

Description automatically generated  
  
  
Add Employee: Allows the administrator to add a new employee’s information.  
  
  
  
  
  
  
  
  
  
Graphical user interface

Description automatically generated  
  
Edit Employee: Allows the administrator to edit the employee’s information.  
  
  
  
A picture containing graphical user interface

Description automatically generated  
  
Products Main Screen: This screen allows the administrator to view all the current products that are being sold with the relevant information about the department it belongs to.

Graphical user interface

Description automatically generated  
  
Add Product: Allows the administrator to add a new product and assign it to a department.  
  
  
Graphical user interface

Description automatically generated

Edit Product: Allows the administrator to edit product information.

Graphical user interface

Description automatically generated  
  
Department Main Page: Show all of the departments currently in the company.  
  
  
Graphical user interface, text

Description automatically generated  
  
  
Add Department: This screen allows the administrator to make a new department.

Graphical user interface

Description automatically generated  
  
Edit Department: Allows the user to edit the name of a department.  
  
  
  
Graphical user interface, application

Description automatically generated  
  
  
Roles Main Screen: This screen allows the administrator to see all of the roles currently assigned in the company. Note that each department has its own Manager.

Graphical user interface

Description automatically generated  
  
  
Add Role: This screen allows the administrator to add a new role for a department.  
  
  
  
Graphical user interface

Description automatically generated  
  
  
View Role: This screen allows the administrator to edit a current role for a department.

Calendar

Description automatically generated  
  
Schedules Main Screen: This screen provides the user with an overview of the weeks where schedules have been assigned and where there are still outstanding schedules to be assigned.

Graphical user interface

Description automatically generated

Create Automated Scheduling: Here the administrator chooses the week number and the year. This will allow the system to automatically assign a schedule to the chosen week.

Graphical user interface, website

Description automatically generated

Cart Screen: This screen is shown when checking out items. The number of products in stock changes when the stock is added to a cart. This links immediately to the database.

Graphical user interface, text

Description automatically generated

Restocking Page: This page is seen by the stock manager who approves the restocking request when they are requested by another employee in the company.

# GUI: Website

Graphical user interface, website

Description automatically generated

This page allows the employee to input their unique user credentials. The is also the home page and the first thing a person will see. Pressing the “Login” Button will allow the system to check your credentials. If approved, you will be redirected to the next page. If credential check is not passed, you will receive an error message prompting you to retry and reinput your credentials.

A screenshot of a computer

Description automatically generated with medium confidence

This page shows the relevant Employee’s personal information. The information is broken up into sections with the appropriate headings. Here the Employee can choose to update the information. This allows the data to be edited in the fields and confirmed by clicking the “Update Account” button.

Graphical user interface, table

Description automatically generated  
  
  
  
Here the Employee is able to view their upcoming schedule for the week. Date and time for the shift is show so the Employee is able to plan their lives around their required working hours. It also shows their Salary for the shift that will be earned. Employees are also able to call in sick. If they choose to do so, this shift will be removed from their schedule and no long be visible.