



**Kingdom of Saudi Arabia
Ministry of Education
King Faisal University
College of Computer Sciences & Information Technology**

(Co-op Training Final Report: King Saud bin Abdul-Aziz University for Health Sciences)

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ABSTRACT

Cooperative training provides an amazing experience to college students as it provides an overall idea of workplace and experience working on real projects that are useful to the company, cooperative training aims to enhance students' skills and practice what they have learned in the past years in college. One of the companies that provide a training opportunity is King Suad bin Abdul-Aziz University for Health Sciences which is the first public university in the Kingdom of Saudi Arabia and the Middle East region specialized in health sciences, its headquarter in the Riyadh, it has two other campuses located in Al-Ahsa and Jeddah. It includes many departments such as the information technology department which is where students practice their training, the aim of the department to fulfill and serve the needs of the university by providing useful programs that help the staff and students in many ways. The whole period of the training programs was full of a lot of work, we started the first week by introducing us to the workplace, introducing the work plan, followed by the next two weeks where we have started to analyze the system, by the fourth week we started practicing the software needed to implement the system, the last 4 weeks we started implementing the system and ended up by submitting the project. We ended the last 3 weeks of the training with the user support, networking unit. The main benefit of co-op training is to prepare students for the workplace.

Acknowledgment

I'm genuinely thankful because I have managed to get on board with KSAU-HS program for trainees, providing such a great experience through learning new skills, working on real projects with such a great team of mentors which we couldn't manage without the corporation of my colleague's team members and the IT departments mentors. I would like to express my sincere thanks to Eng. Monera alhumam who have welcomed us in the department, created the training plan, mentored and helped us through the work in the project. I would like also to express my gratefulness to Dr. Misbhauddin Basher who has been a great supervisor by providing us a convenient way to communicate, freely asking questions and being there for our concerns, explaining all the details needed to go through the co-op training, providing us with useful comments about the report and advising us to achieve maximum results from the cooperative training. I would also like to thank my teammates for sharing useful information while working together and helping each other to pass the problems and learn from each other.

Acronyms and Abbreviations

King Saud bin Abdul-Aziz University for Health Sciences (KSAU-HS).

National Guard Hospital (NGH).

ER diagram (Entity Relationship diagram).

Information Technology (IT).

Cascading Style Sheet (CSS).

Personal Computer (PC).

Active Server Pages.NET (ASP.NET).

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1. Introduction

The purpose of this report is to show the experience gained and the accomplishments achieved during the cooperative training at King Saud bin Abdul-Aziz University for Health Sciences in Al-Ahsa. Moreover, this report will explain how the theoretical knowledge gained from King Faisal University has been applied in a real work environment.

King Saud bin Abdul-Aziz University for Health Sciences (KSAU-HS) is one of the companies that provides training opportunities for college students, it is a governmental university specialized in health sciences, which includes many departments such as the communication department, deanship of student' affairs, security department, the IT services department, and many others. The IT-Services department is where students practice their training, offers 4 different programs for their trainees to develop their skills in their current roles, including practical projects and monitoring of the work progress to achieve maximum results, the first program is the application unit it includes practical projects related to web applications including the system analysis, interface designing, and system implementation and it is the first unit we have started working on as the first task is to implement a system assigned to us.

The second program is technical support which the user support team which is afforded to the user and the issues reported and how to solve them. The third program is the system unit which includes the technical support which covers the PC troubleshooting, printer installation, and maintenance. The fourth program is networking which includes working on understanding the process and problems directly related to the system's network. KSAU-HS has developed many systems of their own such as Admission Management System which from the department of Deanship Of Admission And Registration (DAR) which is a web-based application to monitor, track and control the onsite registration process, and to keep track of every applicant status from the first filtration process till the final acceptance decision, also the Directory + Communication Asset Management System which is from the Communication Department which is a web-based application to replace the manual way of organizing and delivering communication assets. also, it allows the user to search through a directory for different Ext #. Deanship Of Students Affairs Inventory System (Al-Ahsa+ Riyadh) from the department of Deanship Of Student Affairs which is a web-based application that organize the work in asset\non-asset management, and provides a complete visibility into inventory and generates different types of reports and statistics, and the Asset

Management System (Al-Ahsa+ Riyadh) from the IT-Services department located in Al-Ahsa and Riyadh which is web-based application that organizes the work in asset management and provide complete visibility into IT inventory and generate different types of reports and statistics. And many different systems.

KSAU-HS developed many useful systems which make it the right place for the students to enroll in their training program to learn and understand and work on real projects that are needed by the university and realize what it takes to implement a system. Moreover, the overall starting experience at KSAU-HS has gained us a lot of benefits and knowledge as it includes practicing what we have learned in a lot of subjects in college and applying that knowledge in the training such as object-oriented programming 1 & 2, web-based systems, human-computer interactions and many others, the overall training experiences included many tasks, such as weekly presentations by the students which makes us share knowledge and advance our speaking skills, also we I have worked and implemented a forms tracking system for the secretaries using visual studio ASP.NET MVC, also I have created my own resume as a website using WordPress. Moreover, I learned about the different components of the data center and how they're connected together, I learned about new devices and techniques to trouble shoot problems in the networking unit, I learned how to trouble shoot and check on PC's, projectors, smart boards, also learned about the user support system.

This report will cover the whole period in the training and describe every task that has been done through the past 12 weeks in details, starting by chapter 2 which it includes information about the company I trained in and the department as well, along with chapter 3 which includes information about the work description that I have been assigned to complete along with the details of each task I have accomplished, moreover, chapter 4 includes the conclusion and recommendation where I summarized my training experience and provided my recommendations.

The expected outcomes of the co-op training is to enhance our skills as computer science students and apply our theoretical and practical knowledge into real projects that solve the company issues, learn how to work in with teammates in a workplace, search and fix the problems that face, self-learning and applying new functions on our own to the project, interact with end-users, understand the steps taken to implement the system from the specifying requirements to deploying the system, moreover thankfully we have achieved the desired outcomes and enhanced our skills as expected.

2. Company profile:

2.1 *Company Description*

King Saud bin Abdul-Aziz University for Health Sciences (KSAU-HS) is a governmental university specialized in health sciences. KSAU-HS is approved by the Ministry of Education in the Kingdom of Saudi Arabia for its various programs for undergraduate and postgraduate degrees. KSAU-HS programs has achieved outstanding outcomes and positive results in preparing Saudi cadres of Saudi cadres in Medical fields and health sciences, which led to making the Custodian of the Two Holy Mosques, King Abdullah bin Abdul-Aziz issue a royal decree on 5 Safar 1426 corresponding to 6 March 2005, to establish the university named "King Saud bin Abdul-Aziz University for Health Sciences", which is based in Riyadh and has two campuses in Jeddah and Al-Ahsa. KSAU-HS has 14 colleges in three university campuses in Riyadh, Jeddah, and Al-Ahsa. Seven colleges in the university campus in Riyadh, four colleges in the university campus in Jeddah, Three colleges in the university campus in Al-Ahsa.

It has many programs for the Undergraduate, master's programs, Saudi board program and fellowships [1]

2.2 *Department Overview*

Information Technology Services Department:

The main purpose of Information Technology Services in the King Saud bin Abdul-Aziz University for Health Sciences (KSAU-HS) is to provide high-quality computing, networking and support services that are necessary to enable the University to fulfill its mission of preparing services that fulfill the needs of the university's staff and students. The IT services department provide various programs for their trainees to achieve positive results in training them in the practical fields. [2]

3. Work Description

3.1 List of Projects/Tasks

Project Title	Project Section #	Project Weeks #
Welcoming and introduction about IT-Services department/Task1	3.2.1	1
Analyzing the system using Visio Microsoft and Marvel application /Task2	3.2.2	2-3
Setting up and training on visual studio/Task3	3.2.3	4-5
System implementation/Task 4	3.2.4	6-7
System implementation and student presentation/Task 5	3.2.5	8
System implementation, submission and introduction about WordPress /Task 6	3.2.6	9
Data center, PC Trouble shooting/Task 7	3.2.7	10
Creating my resume using WordPress/Task 8	3.2.8	11
User support/Task 9	3.2.9	12

3.2.1 Project/Task One (Welcoming and introduction about IT-Services department)

3.2.1.1 Background:

The welcoming and introduction part included a tour in the building facilities, our room for working and so on. Starting by a brief introduction about the nature of the IT services department's work, including the systems implemented by the department and the systems needed for the department, covering the programs used to implement their systems which is visual studio ASP.NET MVC 5. As well as introducing the project that we will work on for the next month, starting by diving us into groups of 2 students, providing us with the project idea which is a tracking system for the secretaries in the departments of KSAU-HS, the core of the project is to help the secretaries to keep a track of every documents such as purchases, receipts, requests and other related work activates, by being able to save and update the details of the work process to process the documents that takes times and to have easy access to them.

following up with a brief explanation of the steps on how to use and work with visual studio giving us a clear picture of how the work will be implemented. The task started by giving us a project document that we needed to fill up to help us maintain a clear picture of the project description, purpose, system requirements and all project related information, the other part that we needed to do is to ask the secretary of the department Mr. Erwin about what kind of information needed to be included in the system, the last part of the task was to draw the initial flowchart of the system.

3.2.1.2 Approach /Objective

The approach we used to accomplish this task is to work as teammates and share ideas, discuss the ideas with our supervisor. Our strategy was to gather the data we needed and after that share what we collected to the other teams and discussing what we gathered until we reached a conclusion. The objectives were to develop an understanding of work nature in the university, introduce the systems used by the university, understand the work flow of the projects developed by the university, cooperate and work with teammates, learn how to document the project details and collect the information needed, learn how to collect data from the end-user.

3.2.1.3 Data Collection, analysis and requirements (Software, Hardware)

- 1- PC.
- 2- Keyboard, mouse.
- 3- Visual Studio.

- 4- Microsoft Visio.
- 5- Project document.

3.2.1.4 Model & Photos

N/A

3.2.1.5 Problems Faced & Solutions (Tools and Techniques used to solve the problem)

The problem that we faced was that each member of the groups understood the project idea in a different way which led to different ideas of the work flow. We had to ask our supervisor and our mentors to give us more clarity about the project idea. Moreover, our supervisor provided us with a document for the project which include the project title, date started, date ended, project purpose, project description, requirements and so on. We have started by discussing the project title, purpose and description, requirements after the group discussion we had to conclude and write it down. We proposed what we have written to our supervisor and it was correct and clear to all of us.

3.2.1.6 Procedures (Steps taken to solve the problem)

- 1- We filled the project document by writing the project title, date started, date ended, project purpose, description, functional and non-functional requirements.
- 2- We have visited the department's secretary and asked him what problems he faces during daily work and how he keeps track of his work, we asked him what information he needs to request any forms, moreover he provided us with a paper that he fills up once he needs to make a request to other departments.
- 3- We have collected the information from the secretary and updated our requirements.
- 4- We have sketched an initial flowchart for the system to represent the work flow of the system.
- 5- In the end we have submitted our project document, flowchart to our supervisor to be checked and we have achieved results of this task.

3.2.1.7 Experience Gained & Techniques Learned

Working with a group of different ideas and perspectives and achieving a conclusion of our ideas, understanding how the companies implement their systems, working with a project document and understanding all the details that are necessary to have before starting the implementation of any system, and learning how to gather and collect the information from the end-user.

3.2.1.8 Tasks Accomplished & Analysis and discussion of actual results versus the expected ones

The tasks that we have accomplished are discussing and understanding the project idea, filling up the project document, gathering the data from the department's secretary, sketching the flowchart of the system and discussing it.

The expected results were to reach a propose the project idea, understand the project idea, to write the purpose, description and requirements and to draw the initial flowchart of the system and discussing what we have done with our supervisor, giving us comments and modifying our work to reach the final results which we have accomplished by the teams cooperation.

3.2.1.9 Relationship to academic background

What we have worked through is related to several subjects such as:

- 1- Introduction to Computing.
- 2- Fundamentals of IS.
- 3- Business (1).
- 4- Object Oriented Programming (1).

3.2.2 Project/Task Two (Analyzing the system using Visio Microsoft and Marvel application)

3.2.2.1 Background:

The basic idea of the project is a tracking of university departments' exports and imports. In the case of a specific request, the secretary can follow the application to complete the transaction. The project aims to achieve and organize requests from the director of the department to the secretary and from the secretary to the concerned authorities for the necessary action.

The system will be used by the admin and the user (secretary). The admin can use the system to create an account for the user, updating the information for the user's account. The user can use the system to create a form which can include any request, update, and delete the form, also the user can create a track for a specific form, create a status for track as well as updating and deleting the track. Which achieves the goal of the system to keep track of every request and to search and find the desired request in a short time. This task involves the overall understanding of the system, we have started this task by discussing the project idea, designing the final flowchart of the system, prototyping the system, and drawing the entity relationship diagram of the system.

3.2.2.2 Approach /Objective

The approach we used to accomplish this task was to start by drawing the initial designs in a paper and discussing it with our supervisor to ensure the quality of our understanding before we proceed in designing the diagrams in the software. The objectives were to develop a clear picture of the system's flow, develop an understanding of the system's components and their relationships, and Learning how to prototype the system using new appropriate tool.

3.2.2.3 Data Collection, analysis and requirements (Software, Hardware)

- Requirements:**

- 1- Microsoft Visio for the diagrams
- 2- Lucid chart for diagrams
- 3- Marvel app for prototyping.

- Data Collection for the admin login:**

- *Username*
- *Password*

- Data Collection for the admin create user account page:**

- *Name*

- *ID*
- *Password*
- *Department*
- *Email*
- *Badge*
- ***Data Collection for the admin update user account page:***
 - Name
 - ID
 - Password
 - Verify password
 - Email
 - Badge
- ***Data Collection for the user login:***
 - *Username*
 - *Password*
- ***Data Collection for the user create form page:***
 - *Track Title*
 - *ID*
 - *Description*
 - *Date*
 - *Attachment*
 - *Remark*
 - *Note*
- ***Data Collection for the user select form page:***
 - *Date*
 - *Status*
 - *Other Status*
- ***Data Collection for the user create track page:***
 - *Track Title*
 - *ID*
 - *Attachment*

- *Remark*
- *Note*
- ***Data Collection for the user setting page:***
 - *Department Email*
 - *Remainder*

3.2.2.4 Model & Photos

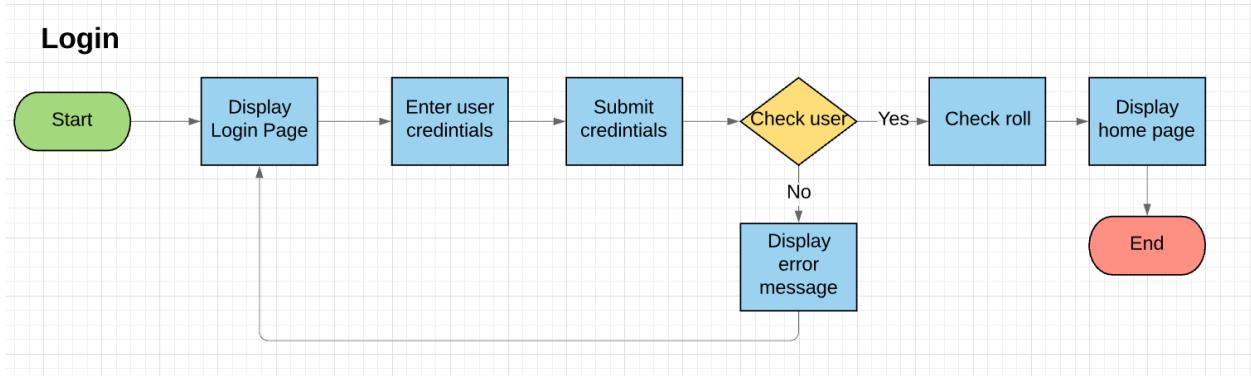


Figure 3.2.2.4.1: Flow chart for login page

Figure 3.2.2.4.1 above represents the work flow of the system in case a user logs in to the system whether it is a regular user or admin.

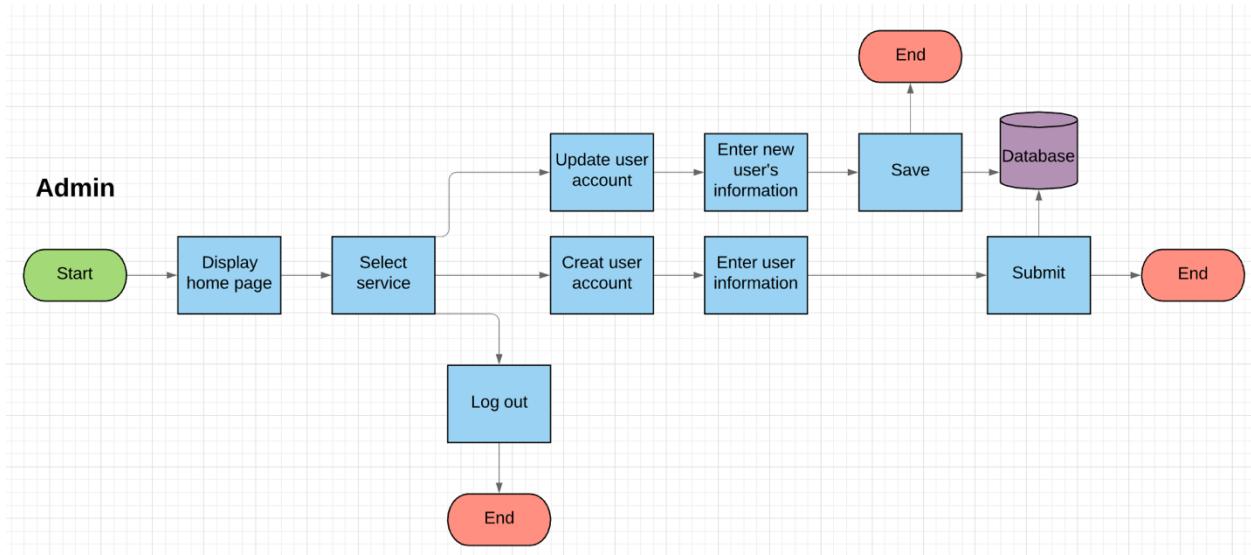


Figure 3.2.2.4.2: Flow chart for admin page

Figure 3.2.2.4.2 above represents the work flow of the system in admin side of using the system after logging in and providing the main functions that the admin can accomplish through the system.

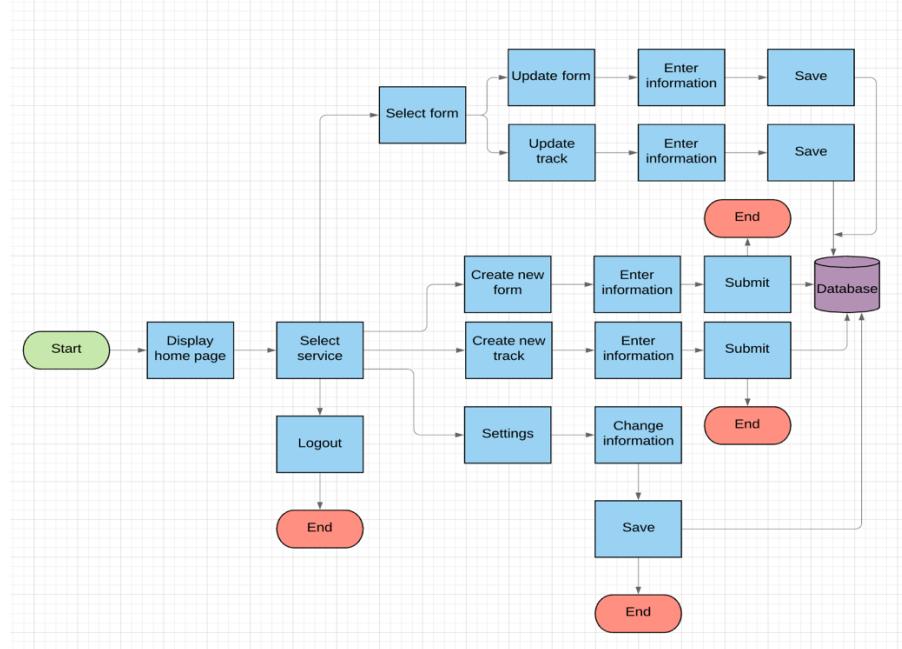


Figure 3.2.2.4.3: Flow chart for user page

Figure 3.2.2.4.3 above represents the work flow of the system in user side of using the system after logging in and providing the main functions that the admin can accomplish through the system.

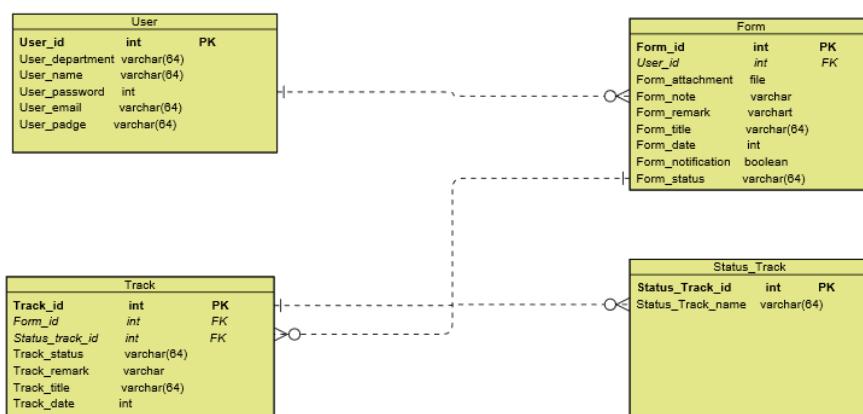


Figure 3.2.2.4.4: ER diagram

Figure 3.2.2.4.4 above shows the entity relationship diagram of the whole system showing how each table is related to each other by providing the attributes and linking the foreign keys to each table and showing their relationships.

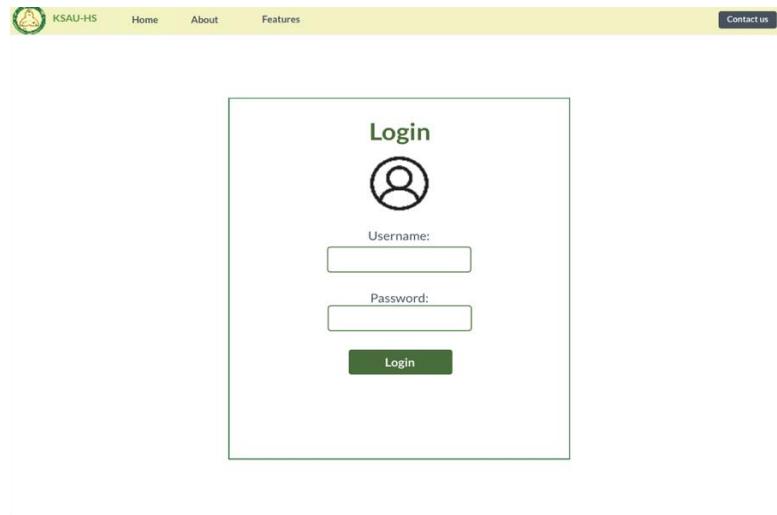


Figure 3.2.2.4.5: Prototype for the login page

Figure 3.2.2.4.5 above shows the prototype of the login page that we have created using Marvel app software.

A screenshot of a web application prototype. At the top, there is a navigation bar with a logo, the text 'KSAU-HS', and links for 'Home', 'About', 'Features', and 'Contact us'. Below the navigation bar is a sidebar with a 'Services' section containing three items: 'Create User Account >', 'Update User Account >', and 'Logout >'. To the right of the sidebar is a form for creating a user account. The form includes fields for 'Name:', 'ID:', 'Password:', 'Department:', 'Email:', and 'Badge#:', each with an associated input field. At the bottom of the form is a 'Submit' button.

Figure 3.2.2.4.6: Prototype for create user account page

Figure 3.2.2.4.6 above shows the prototype of the home page for the admin including the form for creating a user account.

The screenshot shows a web-based application interface for managing user accounts. At the top, there is a navigation bar with links for 'Home', 'About', and 'Features'. A 'Contact us' button is also present. Below the navigation, a search bar contains the text 'Norah Hamad'. On the left side, a sidebar titled 'Services' lists options: 'Create User Account', 'Update User Account', and 'Logout'. The main content area is titled 'Services' and contains a form for creating a new user account. The form fields include:

- Name: Norah Hamad
- ID: 216099765
- Password: (redacted)
- Verify Password: (redacted)
- Department: ISD
- Email: norah99@outlook.com
- Badge#: T3960

A large green 'Save' button is located at the bottom of the form.

Figure 3.2.2.4.7: Prototype for updating a user's account page

Figure 3.2.2.4.7 above shows the prototype of the admin page including the form for updating a user account.

The screenshot shows a web-based application interface for managing forms. At the top, there is a navigation bar with links for 'Home', 'About', and 'Features'. A 'Contact us' button is also present. Below the navigation, a search bar is visible. On the left side, a sidebar titled 'Services' lists options: 'Create New Form', 'Select Form', 'Create Track', 'Settings', and 'Logout'. The main content area is titled 'Services' and contains a form for creating a new form. The form fields include:

- Track Title: (empty input field)
- ID: (empty input field)
- Description: (empty input field)
- Date: (calendar icon)
- Attachment: (file upload icon)
- Remarks: (text area with placeholder 'Type here your message')
- Notes: (text area with placeholder 'Type here your message')

A large green 'Submit' button is located at the bottom of the form.

Figure 3.2.2.4.8: Prototype for create new form page

Figure 3.2.2.4.8 above shows the prototype of the home page for the user including the form for request.

The screenshot shows the KSAU-HS website's home page. At the top, there is a navigation bar with links for Home, About, Features, and Contact us. Below the navigation bar is a sidebar titled "Services" with icons for gear and lightbulb. The sidebar contains links for "Create New Form", "Select Form", "Create Track", "Settings", and "Logout". The main content area is titled "Available Forms:" and displays a table with four rows of data. The table has columns for "#", "ID", "Update", and "Add Track". Each row contains a link labeled "Update" and "Update Track".

#	ID	Update	Add Track
1	4325	Update	Update Track
2	6523	Update	Update Track
3	9854	Update	Update Track
4	5735	Update	Update Track

Figure 3.2.2.4.9: Prototype for the searching page

Figure 3.2.2.4.9 above shows the prototype of the search page for the user to search a form by typing the id of the form in the search bar for a specific form, otherwise it will display all the forms created.

The screenshot shows the KSAU-HS website's search page. At the top, there is a navigation bar with links for Home, About, Features, and Contact us. Below the navigation bar is a sidebar titled "Services" with icons for gear and lightbulb. The sidebar contains links for "Create New Form", "Select Form", "Create Track", "Settings", and "Logout". The main content area is titled "Update Track:" and contains several input fields and a date picker. The "Date:" field is a date picker showing October 2017. The "Status:" field is a dropdown menu with the placeholder "Make a selection". The "Other:" field is a text input field. A "Submit" button is located at the bottom of the form.

Figure 3.2.2.4.10: Prototype for select form page

Figure 3.2.2.4.10 above shows the prototype the updated track page which appeared after the user searched a form, selected the form, and then pressed update track.

The screenshot shows a web application interface. At the top, there is a navigation bar with a logo, the text 'KSAU-HS', and links for 'Home', 'About', 'Features', and 'Contact us'. On the left, a sidebar titled 'Services' contains links for 'Create New Form', 'Select Form', 'Create Track', 'Settings', and 'Logout'. The main content area is titled 'Update Form:' and contains the following fields:

- Track Title: SPR
- ID: 543575
- Description: Receipt
- Date: (calendar icon)
- Attachment: (attach file icon)
- Status: Make a selection (dropdown menu)
- Remarks: (text area placeholder: Type here your message)

A green 'Save' button is located at the bottom right of the form area.

Figure 3.2.2.4.11: Prototype for update form page

Figure 3.2.2.4.11 above shows the prototype the updated form page which appeared after the user searched a form, selected the form, and them pressed update form.

The screenshot shows a web application interface. At the top, there is a navigation bar with a logo, the text 'KSAU-HS', and links for 'Home', 'About', 'Features', and 'Contact us'. On the left, a sidebar titled 'Services' contains links for 'Create New Form', 'Select Form', 'Create Track', 'Settings', and 'Logout'. The main content area is titled 'Update Form:' and contains the following fields:

- Track Title: (empty input field)
- ID: (empty input field)
- Attachment: (attach file icon)
- Remarks: (text area placeholder: Type here your message)
- Notes: (text area placeholder: Type here your message)

A green 'Submit' button is located at the bottom right of the form area.

Figure 3.2.2.4.12: Prototype for create track page

Figure 3.2.2.4.12 above shows the prototype of the create track page including all the information needed to create a track for a form.

The screenshot displays a user interface for a system named 'KSAU-HS'. At the top, there is a navigation bar with links for 'Home', 'About', 'Features', and 'Contact us'. Below the navigation bar is a search bar labeled 'Search by ID' with a magnifying glass icon. On the left side, there is a vertical sidebar titled 'Services' with a gear icon. The sidebar contains the following menu items: 'Create New Form' (with a right arrow), 'Select Form' (with a right arrow), 'Create Track' (with a right arrow), 'Settings' (with a right arrow, currently selected), and 'Logout' (with a right arrow). The main content area on the right has a heading 'Department Email:' followed by a text input field. Below this, there is a section for 'Reminder:' with two radio button options: 'Apply' (selected) and 'Dapply'. At the bottom of the main content area is a large green 'Submit' button.

Figure 3.2.2.4.13: Prototype for settings page

Figure 3.2.2.4.13 above shows the prototype the settings page with include the department's email and a reminder option for the user.

3.2.2.5 Problems Faced & Solutions (Tools and Techniques used to solve the problem)

We could not use or download Microsoft Visio to design the flowchart and ER diagram because it required a company email. We had to search about another tool to design our diagrams, so we used Lucid chart we designed our diagrams.

3.2.2.6 Procedures (Steps taken to solve the problem)

- 1- Started by sketching the initial flowcharts, ER diagrams, and in the interfaces in a paper.
- 2- Created the final flowcharts of the system using Lucid chart
- 3- Created the final entity relationship diagram using Lucid chart
- 4- Created the prototype of the system's interfaces using Marvel app

3.2.2.7 Experience Gained & Techniques Learned

In this task I learned about new useful software to design diagrams, searched for different software to fit our needs, practiced drawing the initial design on a paper and transfer it to the final design in the software, and practiced how to prototype an interface of a system.

3.2.2.8 Tasks Accomplished & Analysis and discussion of actual results versus the expected ones

The tasks that we have accomplished are designing the different flowcharts for the system, designing the final ER diagram for the system, and prototyping the interfaces of the system.

The expected results were to complete the analysis of the system starting by initial design on the flowchart and ER diagrams and the interfaces and ending with the final design using different software which we have accomplished.

3.2.2.9 Relationship to academic background

What we have achieved in this task is related to different subjects which we have accomplished the same outcome of the subjects.

- 1- Object Oriented Programming (1).
- 2- Object Oriented Programming (2).
- 3- Database Concepts & Design.
- 4- Software Engineering.
- 5- Human Computer Interaction.

3.2.3 Project/Task Three (Setting up and training on visual studio)

3.2.3.1 Background:

In this task we were assigned a task to search about visual studio model view controller and have an over view of how to create a project. We have started the first week by downloading visual studio 2017 in our devices, after that we have spent the rest of the week taking lessons every day from different instructors from the IT-Services department on how to create a new project step by step, we have created a new project, after that we have created the models (which represents the main classes for our system) and we have included all the attributes such as the primary key, the foreign key and so on, after that we have learned to add the models to the database step by step, following up with how to create the main pages of the system, how to add the layout and change the style for every page and after each lesson we spent the rest the of the days practicing and applying what we have learned, in the following week we have created a new project from scratch by ourselves to practice our knowledge and to avoid the previous mistakes and to develop an understanding of how to use visual studio (Model-View Controller) specifically. We spent the last 3 days of the week searching additional features and functions that we can apply to our system and we have applied different useful functions, we searched about downloading useful packages to the system.

The aim of this task is to ensure that we explore, practice using visual studio ASP.NET MVC and understand every component of the software, understand how to link the project to the database, creating the main pages, practice changing the layout of the colors, searching about extra functions, until we successfully learn how to use the system easily so we can start implementing the project assigned to us.

3.2.3.2 Approach /Objective

The approach we used to accomplish this task was to start by conducting a self-study about visual studio ASP.NET MVC, before we proceed by taking lessons and practicing on it, having an overview of how to use it, what useful functions we can build...etc. The main objectives were to practice the visual studio which is used by many companies, understand the main components of ASP.NET MVC, experiencing visual studio to develop an understanding of its components, searching about different features and functionalities that we can apply to the system, learning how to add a layout to the system and changing the style of the interfaces, creating a test project and applying all what we have learned on it, adding and manipulating functionalities of the system.

3.2.3.3 Data Collection, analysis and requirements (Software, Hardware)

- 1- PC.
- 2- Keyboard, mouse.
- 3- Visual Studio.

3.2.3.4 Model & Photos

N/A.

3.2.3.5 Problems Faced & Solutions (Tools and Techniques used to solve the problem)

Teammates could not download the same version of visual studio, so we had to report this issue to our supervisor and then they have downloaded the same version in their PC's ready for us to use and work on.

3.2.3.6 Procedures (Steps taken to solve the problem)

- 1- Search about visual studio ASP.NET MVC 2017.
- 2- Download visual studio 2017.
- 3- Created a new project step by step by taking lessons from instructors.
- 4- Linked the project to the database
- 5- Created the main pages of the system
- 6- Learned and practiced how to change the layout and style of the system
- 7- Created an overall test for the project and tried every tool.

3.2.13.7 Experience Gained & Techniques Learned

We have learned a lot of useful techniques and gained new information, since visual studio uses C sharp as a programming language, we learned the language, learned about a new tool to implement systems, learned how to use visual studio ASP.NET MVC easily, learned how to add a layout and change the style of the system interface's, and learned how to link the project data to the database

3.2.3.8 Tasks Accomplished & Analysis and discussion of actual results versus the expected ones

The main core of this task is to have an introduction about visual studio, practice and learn about ASP.NET MVC and its components, how to use the basic function, create models, views, and controllers and experience different features of the software, explore visual studio until we are ready to implement their system, which we have accomplished at the end of this task.

3.2.3.9 Relationship to academic background

- 1- Object Oriented Programming (1).
- 2- Object Oriented Programming (2).
- 3- Database Concepts & Design.
- 4- Software Engineering.
- 5- Operating Systems.
- 6- Web-Based Systems.

3.2.4 Project/Task Four (*System implementation*)

3.2.4.1 Background

This task covers a period of two weeks which is the beginning of the system implementation of the tracking system which we have been assigned to implement from the beginning of the training using visual studio ASP.NET MVC (Model-View-Controller). The language used to implement the project is C sharp which was a quite a challenge since we never used it before. The project contains main functions: the admin can create a user account, update the user account, delete a user account, view the details of the user account, reset password for the admin, view the tracks and forms made by the secretaries which is a function we decided to add. In the other hand, the user can create a form, update, view details and delete a form, view all forms and search by name or id, also the user can create a track for a specific form which will be linked to the form by using the form id as a foreign key, update, view details and delete a track, view all tracks and search by name or id. The user can also make a status to the track by linking the status id to the track table, we made the status separate in case the user wants to add different status each time, moreover the user can update the status and delete it as well, this is the overall view of the main pages and I will modify what we have created by taking screenshots of the system. At the beginning of the week we have been asked to make a time table that shows the part of the system and the main functions that we will implement each week until the day of submission, also our supervisor specified that at the end of every week we need to present what we have accomplished according to our time table and we get assigned based on our work. Therefore we created a the time table and decided for the first week to create the models, link the models to the database, create the views which are the interfaces, download a bootstrap and make changes to fit our need so we will finish the main layout and views for the system, by the second week we decided to change the style of every page.

3.2.4.2 Approach /Objective

We needed to complete the task specified in two weeks, so the approach we used to accomplish this task is to create time table for the work specified by the weeks and what functions supposed to be completed accordingly, we started to gather all the requirements and functions that we needed to start implementing the system, after gathering all the information needed, we started creating

the project. The goal was to implement the main pages of the system and add layout to the home page and change the style of every page.

3.2.4.3 Data Collection, analysis and requirements (Software, Hardware)

We entered sample data to test the system to make sure that the functions of the system are working, for the software we used visual studio, for the hardware we used a laptop.

- Functional requirements (Admin)
 - 1- Create user account.
 - 2- Update user account.
 - 3- Delete user account.
 - 4- Reset password.
 - 5- View created forms by users.
 - 6- View created tracks by users.
- Functional requirements (User)
 - 1- Create tracking form.
 - 2- Update tracking form.
 - 3- Delete tracing form.
 - 4- Create track for a form.
 - 5- Upload an attachment within a form.
 - 6- Check email notification within a form.
 - 7- Update track for a form.
 - 8- Delete track for a form.
 - 9- Create status track for a track.
 - 10- Update status track for a track.
 - 11- Delete status track for a track.

3.2.4.4 Model & Photos

The screenshot shows a 'Create' user account page. At the top, there is a navigation bar with links for 'Application name', 'Home', 'About', 'Contact', 'Register', and 'Log in'. Below the navigation bar, the title 'Create' is displayed above the form. The form has five input fields: 'User Name' (norah), 'User Password' (434343), 'User Department' (cs), 'User Email' (norah@ksau-hs.edu.sa), and 'User Badge' (123456). A 'Create' button is located at the bottom right of the form. Below the form, there is a link 'Back to List' and a copyright notice: '© 2019 - My ASP.NET Application'.

Figure 3.2.4.4.1: Create user account page

Figure 3.2.4.4.1 above shows the create user account page after creating the classes and adding them to the database and creating the view from the system.

The screenshot shows the 'Create user account' page after styling. The page features a sidebar on the left with icons for 'Dashboard', 'UI ELEMENTS' (Components, Tables, Forms), 'ICONS' (Icons, Widgets, Charts, Maps), and 'EXTRAS' (Pages). The main content area is titled 'Create user account' and contains five input fields: 'Select username' (norah), 'User password' (.....), 'User department' (cs), 'User email' (norah@ksau-hs.edu.sa), and 'User badge' (898989). At the bottom of the form are 'Submit' and 'Reset' buttons. A 'Back to List' link is located below the form. The page includes a header with a search icon, a user profile icon, and other navigation icons.

Figure 3.2.4.4.2: Create user account page after style

Figure 3.2.4.4.2 above shows the create user account page after changing the style and adding a bootstrap.

Index

Create New

User Name	User Password	User Department	User Email	User Badge	
norah	434343	cs	norah@ksau-hs.edu.sa	123456	Edit Details Delete
maha	99	is	maha@ksau-hs.edu.sa	545454	Edit Details Delete

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Figure 3.2.4.4.3: Index page for user account

Figure 3.2.4.4.3 above shows the index after creating a user account, it shows the list of the created accounts, the above style is the default layout.

The screenshot shows a web application interface. On the left is a sidebar with a navigation menu:

- Dashboard
- UI ELEMENTS
 - Components
 - Tables
 - Forms
- ICONS
 - Icons
 - Widgets
 - Charts
 - Maps
- EXTRAS
 - Pages

The main content area has a title "Create New" and a subtitle "Data Table". It contains a table with the following data:

Username	User password	User department	User email	User badge	
norah	232323	cs	norah98@ksau-hs.edu.sa	123456	Edit Details Delete
norah	123456	cs	norah@ksau-hs.edu.sa	898989	Edit Details Delete

At the bottom of the table, there is a message "Showing 1 to 2 of 2 entries" and a navigation bar with "Previous" and "Next" buttons.

Figure 3.2.4.4: Index page for user account after styling

Figure 3.2.4.4.4 above shows the index after creating a user account, after changing the style and adding a bootstrap.

Application name Home About Contact Register Log in

Edit

System_User

User Name	maha
User Password	99
User Department	is
User Email	maha@ksau-hs.edu.sa
User Badge	545454

[Back to List](#)

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Figure 3.2.4.4.5: Edit user account page

Figure 3.2.4.4.5 above shows the edit user account before styling; the above style is the default layout.

Dashboard

UI ELEMENTS

- Components >
- Tables >
- Forms >

ICONS

- Icons >
- Widgets
- Charts >
- Maps >

EXTRAS

- Pages >

Edit user account

Username	norah
User password
User department	CS
User email	norah98@ksau-hs.edu.sa
User badge	123456

[Back to List](#)

Figure 3.2.4.4.6: Edit user account page after styling

Figure 3.2.4.4.6 above shows the edit user account after changing the style and adding a bootstrap.



Figure 3.2.4.4.7: Details user account page

Figure 3.2.4.4.7 above shows the details user account before styling; the above style is the default layout.

Figure 3.2.4.4.8: Details user account page after styling

Figure 3.2.4.4.8 above shows the details user account after changing the style and adding a bootstrap.



Delete

Are you sure you want to delete this?

System_Form

User Name	norah
Form Note	III
Form Remark	ooo
Form Title	department
Form Date	25/11/40 12:00:00 م
Form Notification	<input checked="" type="checkbox"/>
Form Status	open

[Delete](#) | [Back to List](#)

Figure 3.2.4.4.9: Delete user account page

Figure 3.2.4.4.9 above shows the delete user account before styling, the above style is the default layout.

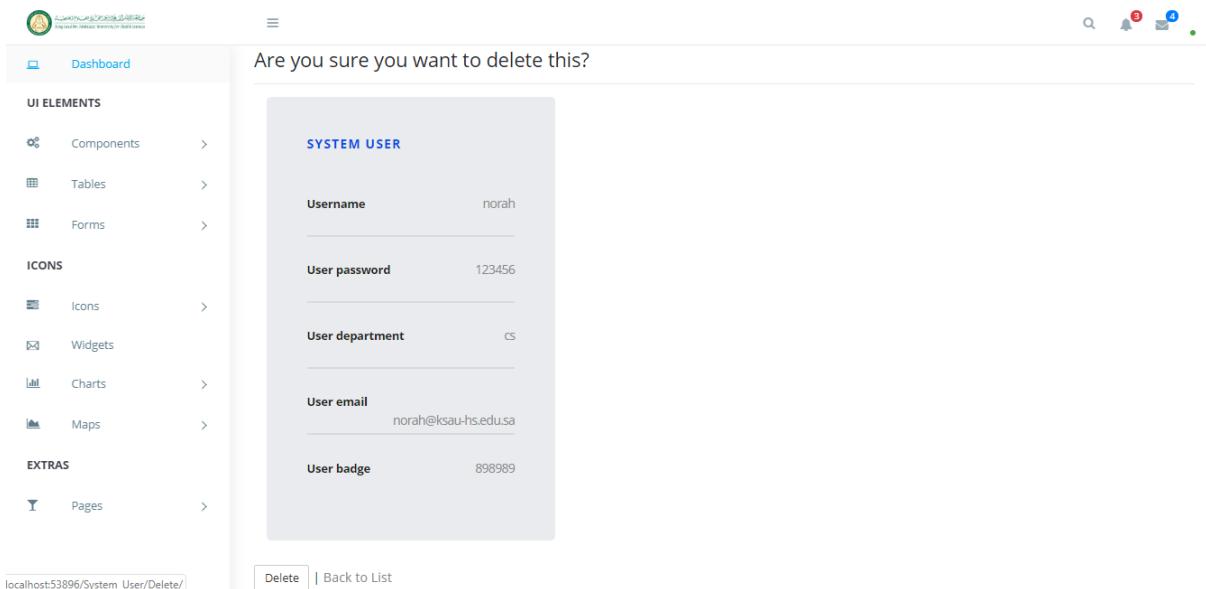


Figure 3.2.4.4.10: Delete user account page after styling

Figure 3.2.4.4.10 above shows the delete user account after changing the style and adding a bootstrap.

The above photos showed an example of one class which is create a user account, after and before changing the layout and style, we have 3 more classes, the same process goes for creating form, creating track, and creating status track.

3.2.4.5 Problems Faced & Solutions) (Tools and Techniques used to solve the problem)

At the beginning of creating the project no problems were faced, but as we went through the project the first problem we faced was the connection with the database, we re-created the project and checked step by step with the other teams until we figured out that we missed one step which caused the problem and we have managed to fix the issue therefore the connection succeeded, the other problem we faced was in the style, we downloaded a bootstrap but we needed to make changes to fit our needs, nothing looked good in the beginning, we needed to search some specific CSS properties, we tried different properties and we managed to fix the layout of all pages.

3.2.4.6 Procedures (Steps taken to solve the problem)

To complete this task, we needed to search a lot and cooperate together as teammates, we decided at the beginning of the day what specific tasks we need to accomplish, we are team of two students, but we are working in different PC'S in order to do the project equally and experience everything and benefiting from it

- 1- we divided the task through the days.
- 2- We specified what we will accomplish each day.
- 3- We compared the work by the end of each day.
- 4- We shared different ideas and helped each other through the problems we faced and explained how we fixed them.

3.2.4.7 Experience Gained & Techniques Learned

By the end of this task we have practiced knowledge we already have, and we have learned a lot of new things, as the implementation started, we worked through the project without assessment form the department instructors, I learned how to program a website using the language C sharp, apply my knowledge in CSS, I learned a lot by my own and searched a lot since I'm using a new language, and I applied what we have searched about, I learned how to download a bootstrap and change it to fit my needs, I learned how to create the models, interfaces, linking the page together.

3.2.4.8 Tasks Accomplished & Analysis and discussion of actual results versus the expected ones

Every phase related to the implementation of the project was evaluated by our supervisor before going to the next one, at the end of every week we had to present to our supervisor what we have accomplished, and we get assigned by what we finished. We were expected to finish what we have written in the time table and thankfully we have managed to finish successfully what we have decided.

3.2.4.9 Relationship to academic background

What we have achieved in this task is related to different subjects which we have accomplished the same outcome of the subjects.

- 1- Object Oriented Programming (1).
- 2- Object Oriented Programming (2).
- 3- Database Concepts & Design.
- 4- Software Engineering.
- 5- Web based system.

3.2.5 Project/Task Five (System implementation and student presentation)

3.2.5.1 Background

This task is divided into two parts, the first task is included in the implementation, in the third week of implementation, we specified earlier what are the requirements and the main functions we need to implement, we had to make an attachment in the form page we specified this function in the time table to be done by the end of the third week, the function includes uploading a file while creating a tracking form, so in this task we needed to implement this function, the function included more than uploading a file, also deleting the file in the update form page, and view the file all from the form page which it will be included in the form as a field. Before starting this week, our supervisor asked us for extra challenge, we were supposed to finish this functionality by the end of the week, our supervisor needed to challenge us, so she asked us to try implement this functionality individually in the weekend and present on Sunday which is the start of week 3 of implementing the system, thankfully I managed to implement part of the function which is uploading the file and saving it in a folder in the system, on Sunday I presented what I did in the weekend and my supervisor thanked me for being the first one to accomplish this task, moreover I spent the rest of the week searching about what is the best way to upload a file, whether to save it to the database or to a folder in the system, how to update the file, download the file, delete the file, I came to a conclusion where I implemented a way that saves uploaded file in both the database and a folder, of course I needed to add a new model (class) for the file to include all the file details such as file name, extension, size and so on, the other part I kept searching how to download the uploaded file, delete it and update it. I managed to find a tutorial that upload multiple files at one time, update and delete specific file. It was not easy to implement since I faced many problems, in the end, I managed to create the functionality successfully. The other part of the task is the student presentation, at the beginning of the training our supervisor mentioned that each Thursday a trainee will make a presentation, the content can be previous projects that we worked on, new technologies and so on, as it was my turn, I prepared a presentation about new technology which is brain chip technology, I explained the technology, objectives, applications, software, hardware, advantages and disadvantages and I concluded by a video that clarify the technology. So, by the end of the week, we presented the uploading file functions, and I presented my presentation successfully, and thankfully our supervisor was satisfied and happy for what I have accomplished.

3.2.5.2 Approach /Objective

The approach this task me and my teammate both started searching and watching tutorials and we both tried different approaches to accomplish the uploading the file task. Until I managed to find a tutorial and work through it until I accomplished the task. As will the student presentation I had to search a lot and when I decided a subject to present, I needed to understand what I present in case of questions asked. The objective was to accomplish the task by improving our self-learning and searching skills.

3.2.5.3 Data Collection, analysis and requirements (Software, Hardware)

We entered sample data to test the uploading file function and ensure that the data has been saved to the folder and to the database, for the software we used visual studio, for the hardware we used a laptop.

3.2.5.4 Model & Photos

The screenshot shows a 'Create form' interface. At the top left is a 'Create form' button. Below it are several input fields and sections:

- Form title:** A text input field containing "works".
- Form note:** A text input field containing "delivery".
- Form remark:** A text input field containing "000".
- Form notification:** A checkbox that is checked.
- File Upload:** A section with a "Choose Files" button and a label indicating "3 files" have been selected.

At the bottom left are "Submit" and "Reset" buttons. Below the form is a "Back to List" link.

Figure 3.2.5.4.1: Create form page with file upload

Figure 3.2.5.4.1 above shows the create form page after implementing the functionality of upload a file and adding a field and label for choosing a file.

Form Table									
		Show 10 entries		Search:					
Username	Form note	Form remark	Form title	Form date	Form notification	Form status	Total Files		
maha	nnnn	nnnn	uni	1440-11-19	<input checked="" type="checkbox"/>	Opened	No File	Edit Details Delete	
maha	kkk	kkk	working	1440-11-20	<input checked="" type="checkbox"/>	Opened	No File	Edit Details Delete	
maha	received at 9:00PM		receipt	1440-11-21	<input type="checkbox"/>	Opened	2 File(s)	Edit Details Delete	
maha	delivery	ooo	works	1440-11-25	<input checked="" type="checkbox"/>	Opened	3 File(s)	Edit Details Delete	

Showing 1 to 4 of 4 entries

Previous **1** Next

Figure 3.2.5.4.2: Index for forms with file upload

Figure 3.2.5.4.2 above shows the index form page after implementing the functionality of upload a file and adding a column for total number of files.

Edit form

Select username	maha
Form title	receipt
Form note	received at 9:00PM
Form remark	
Form notification	<input type="checkbox"/>
Form date	11/21/1440
Status	<input checked="" type="radio"/> Opened <input type="radio"/> Closed <input type="radio"/> Pending
File Upload	<input type="button" value="Choose Files"/> No file chosen • _Test file2.docx • Forms Tracking System (1).png
<input type="button" value="Submit"/> <input type="button" value="Reset"/>	

Figure 3.2.5.4.3: Edit form page with file upload

Figure 3.2.5.4.3 above shows the edit form page after implementing the functionality of upload a file, adding a field for the upload, options to delete each file, choose another file, and by clicking on forms the attachment can be downloaded to the user's system.

SYSTEM FORM

Username	maha
<hr/>	
Files Uploaded	
<ul style="list-style-type: none"> • _Test file2.docx • Forms Tracking System (1).png 	
<hr/>	
Form note	received at 9:00PM
<hr/>	
Form remark	
<hr/>	
Form title	receipt

Figure 3.2.5.4.4: Details form page with file upload

Figure 3.2.5.4.4 above shows the edit form page after implementing the functionality of upload a file, the files can be downloaded also after clicking on the file.

3.2.1.5 Problems Faced & Solutions) (Tools and Techniques used to solve the problem)

In this task I faced a lot of problems, me and my teammates have tried different approaches to accomplish our tasks, we faced different errors, the first problem that I faced that after I upload a file it does not save in the folder, I searched what could be the possible causes to this problem and I managed to fix the issue by fixing the path that saves the file to the folder, the other problem that I faced is that the java script code for deleting a file was not working, I did a lot of research to figure out the issue since the code was correct, I managed to fix the problem by adding a line that downloads the scripts library and finally I fixed my problems and the function worked correctly and as expected

3.2.5.6 Procedures (Steps taken to solve the problem)

- 1- Divide the searching between me and my teammate.
- 2- We both tried different approaches and tutorials.
- 3- We shared knowledge about new information that we learned.
- 4- We understood the errors and searched for causes and solutions.

3.2.5.7 Experience Gained & Techniques Learned

In this task I learned new techniques on how to search for a specific error, how to watch tutorial and apply only what I need from the tutorial and make the changes to fit my code, I learned how to debug my code if it's now working and not generating an error, I learned that I need to download libraries for specific scripts.

3.2.5.8 Tasks Accomplished & Analysis and discussion of actual results versus the expected ones

By the end of this week we were expected to finish the uploading file functionality and we were supposed to present in to our supervisor by the end of the week, as the week ended we managed to complete this function successfully and my supervisor was happy with the results since we added the multiple files upload as an extra feature and she asked for the tutorials and links that helped us achieve this task.

3.2.5.9 Relationship to academic background

What we have achieved in this task is related to different subjects which we have accomplished the same outcome of the subjects.

- 1- Object Oriented Programming (2).
- 2- Database Concepts & Design.
- 3- Web based system.

3.2.6 Project/Task Six (System implementation, submission and introduction about WordPress)

3.2.6.1 Background

This task was the fourth week of implementing the system, we were supposed to submit and present the project by the end of the week. This task contains three different parts: completing implementing the system, submitting the system, taking an introduction about WordPress.

We started the first three days completing the implementation of the system, we had two main functions left for us to implement, the first function is create the login and register page for both admin and the user, specifying in the layout what sections are shown to the admin and what sections are shown to the user by specifying the users roles in the database whether the user is an admin or regular user based on that we managed to strict the admin from accessing the user function and the same for the user. We linked the pages from the layout as well. The second function we needed to implement is sending emails reminders from the system to the user email, in the creating form page we provided a check box named by email notification, once the user decides to check the email notification box the system will send emails reminders every two weeks reminding the user of his forms including the form title, id in the email in case the user needs to updated the form, or change the status of the form. Along with this task we needed to update the layout of the home page, login and register page, the contact us and about pages as well. On Tuesday and Wednesday aside from implementing and finishing the system we took an extra task which is introduction about WordPress presented by Eng. Ghadah Almutlaq, she introduced a new tool for implementing websites which is WordPress, it is an online, open source website creation tool written in PHP, she presented to us how to set up the tool in our devices and how to link it with the database which is PHP my admin, how to create new project, download plugins, layout and how to manipulate the system, we took one hour and the end of these two days, we applied what we have learned at home, we downloaded the tool along with the database and tried exploring the tool. The last part of the task was submitting and presenting the system to our supervisor along with the department's employees.

3.2.6.2 Approach /Objective

The approach we used to accomplish this task is to divide the searching part since the task has a lot of parts and time to accomplish it was not enough, therefore we searched in different directions, applied what we have found from different websites, tutorials. The objective was to reach the end of the project implementation including all the functionalities implemented by us, therefore we enhanced our self-learning skills, problem solving, debugging, understanding different errors, sharing knowledge between the other teams, helping each other, learning from our mistakes, learned and worked with new programming language.

3.2.6.3 Data Collection, analysis and requirements (Software, Hardware)

No data collection was required, for the software we used visual studio, for the hardware we used a laptop.

3.2.6.4 Model & Photos

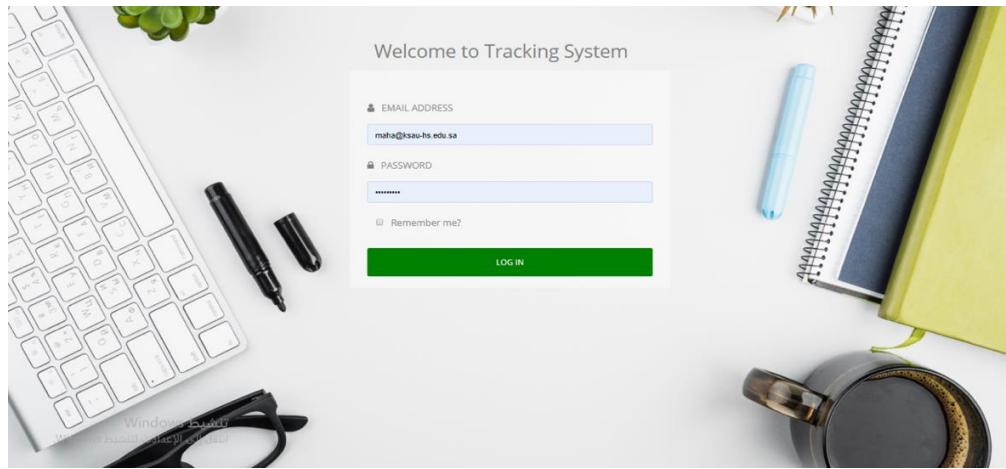


Figure 3.2.6.4.1: Login page

Figure 3.2.6.4.1 above shows the login page for the system, after changing the style by adding the background, container, icons and colors.

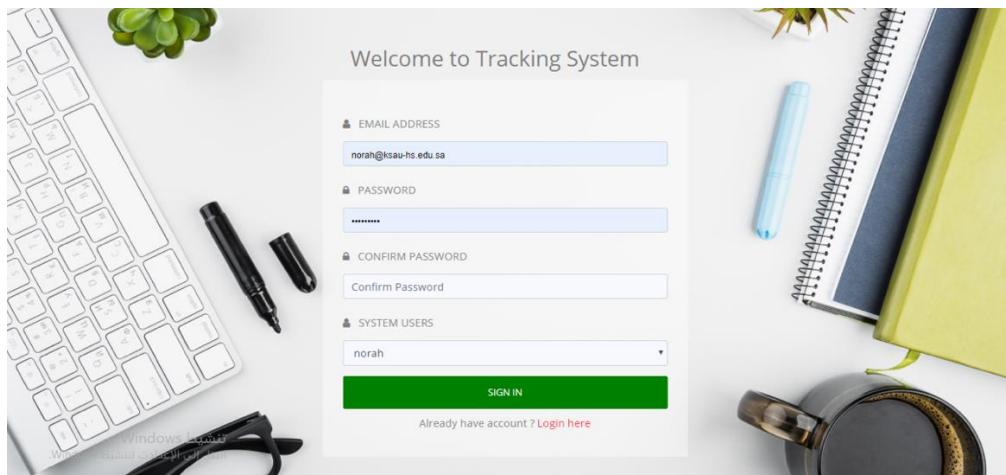


Figure 3.2.6.4.2: Register page (Admin)

Figure 3.2.6.4.2 above shows the register page for the system, which is only accessible by the admin.

Welcome norah@ksau-hs.edu.sa [Home](#) [Contact](#) [About](#)

Services

- System users >
- Forms Tables >

Account Services

- Account >

Forms Tracking System

The system purpose is to keep track of forms such as documents, purchases, or other related activity to work that includes multiple steps from beginning to completion in order to keep track of every step including all necessary information such as dates, status, title and so on to use it as a reminder for future purposes.

Windows تنشيط .Windows انتقل إلى الإعدادات لتنشيط

Figure 3.2.6.4.3: Home page (Admin)

Figure 3.2.6.4.3 above shows the home page for the system logged in as an admin, the admin can create user account, register an account, view created forms and tracks, reset password and log out.

Welcome norah@ksau-hs.edu.sa [Home](#) [Contact](#) [About](#)

Our Main Services

The tracking system provides useful services for the admin and the user, the admin can log in to create user accounts, updates the accounts. The user can log in to the system by the account created by the manager, to create and update a form, view the created forms, create and update the tracks associated with the forms and create a status for each track.

Create user account
Admin can create and update the user account

Create a form
User can create and update a form

Create track
User can create a track that is associated with a form

Create a status track
User can create a status for a track

Windows تنشيط .Windows انتقل إلى الإعدادات لتنشيط

Figure 3.2.6.4.4: Home page 2 (Admin)

Figure 3.2.6.4.4 above shows the rest home page for the system logged in as an admin.

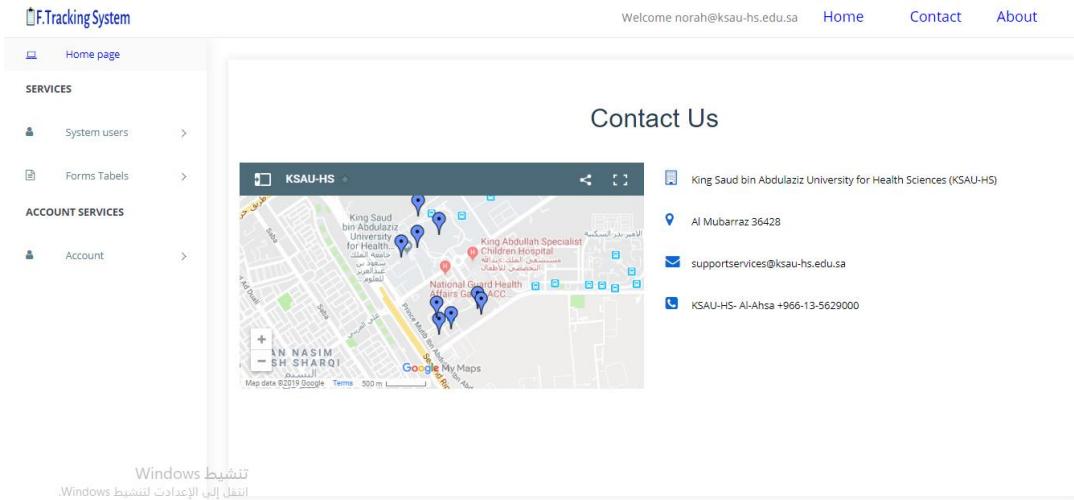


Figure 3.2.6.4.5: Contact us page

Figure 3.2.6.4.5 above shows the contact us page including the information for contacting.

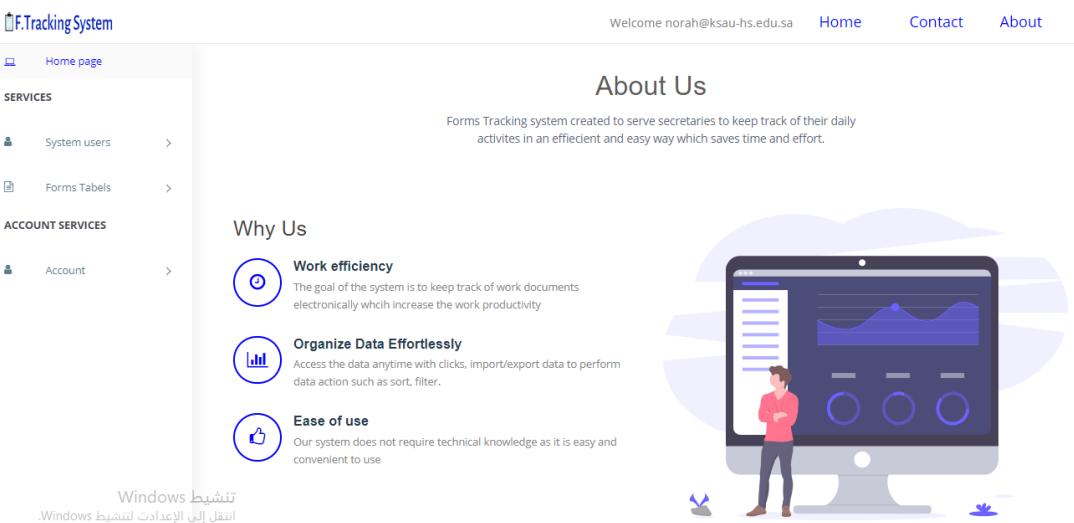


Figure 3.2.6.4.6: About us page

Figure 3.2.6.4.6 above shows the about us page, which include more information about the system.

Welcome norah@ksau-hs.edu.sa [Home](#) [Contact](#) [About](#)

[Home page](#)

SERVICES

- [System users](#)
- [Create user account](#)
- [User's table data](#)

[Forms Tables](#)

ACCOUNT SERVICES

- [Account](#)

Create user account

 Enter username	<input type="text" value="norah@ksau-hs.edu.sa"/>
 User password	<input type="password" value="....."/>
 User department	<input type="text"/>
 User email	<input type="text"/>
 User badge	<input type="text"/>

[Submit](#) [Reset](#)

[Back to List](#)

Figure 3.2.6.4.7: Create user account

Figure 3.2.6.4.7 above shows the create user account page for the admin.

Welcome norah@ksau-hs.edu.sa [Home](#) [Contact](#) [About](#)

[Home page](#)

SERVICES

- [System users](#)
- [Forms Tables](#)

ACCOUNT SERVICES

- [Account](#)

Create New

Data Table

Show 10 entries	Search:				
Username	User password	User department	User email	User badge	
fatima	909090	is	fatima@ksau-hs.edu.sa	232320	Edit Details Delete
ghalia	888888	cs	ghalia@ksau-hs.edu.sa	878789	Edit Details Delete
hanan	898989	md	hanan@ksau-hs.edu.sa	323232	Edit Details Delete
latifah	909090	cs	latifah@ksau-hs.edu.sa	909090	Edit Details

Figure 3.2.6.4.8: User accounts index

Figure 3.2.6.4.8 above shows the data table for the users created by the admin.

Home page

Welcome norah@ksau-hs.edu.sa Home Contact About

SERVICES

- System users >
- Forms Tables >

ACCOUNT SERVICES

- Account >

Edit user account

Username	norah
User password	*****
User department	CS
User email	norah@ksau-hs.edu.sa
User badge	123458

Submit Reset

Back to List

Figure 3.2.6.4.9: Edit user account

Figure 3.2.6.4.9 above shows the edit user account page for the admin to make changes.

Home page

Welcome norah@ksau-hs.edu.sa Home Contact About

SERVICES

- System users >
- Forms Tables >

ACCOUNT SERVICES

- Account >

Form Table

Show 10 entries Search:

Username ↑	Form note ↑	Form remark ↑	Form title ↑	Form date ↑	Form notification ↑	Form status ↑	Total Files ↑
fatima	ooo	ooo	process	1440-11-25	<input type="checkbox"/>	Opened	2 File(s)
ghalia	xxx	xxx	department	1440-11-13	<input checked="" type="checkbox"/>	Opened	2 File(s)
hanan	deliver to riyadh	xxx	attachment	1440-11-21	<input checked="" type="checkbox"/>	Opened	2 File(s)
hanan	deliver to alahsa		new pc	1440-11-19	<input type="checkbox"/>	Pending	2 File(s)
maha	nnnn	nnnn	uni	1440-11-19	<input checked="" type="checkbox"/>	Opened	No File
maha	kkk	kkk	working	1440-11-20	<input checked="" type="checkbox"/>	Opened	No File

Figure 3.2.6.4.10: Forms data table

Figure 3.2.6.4.10 above shows the forms data table created by the users for the admin to view.

Data Table						
Show <select>10</select> entries <input type="text" value="Search:"/>						
Username	Form title	Status trackName	Track remark	Track title	Track date	
fatima	process	opened		xxxx	1440-11-23	
hanan	attachment	pending		on hold	1440-11-21	
hanan	new pc	opened	ccc	cs	1440-11-19	
hanan	attachment	closed			1440-11-25	
maha	receipt	closed	ooo	end	1440-11-21	
maha	working	opened		xxx	1440-11-21	
maryam	working	opened		cccc	1440-11-24	
razan	media	opened		md	1440-11-19	
razan	media	opened		mm	1440-11-21	

Figure 3.2.6.4.11: Tracks data table

Figure 3.2.6.4.11 above shows the tracks data table created by the users for the admin to view.

Change password

Password
 New password
 Confirm password

[Change password](#)

Figure 3.2.6.4.12: Reset password page (Admin)

Figure 3.2.6.4.12 above shows the reset password page for admin to change its account password.

Figure 3.2.6.4.13: Home page (User)

Figure 3.2.6.4.13 above shows the home page for a user logged in to the system.

Figure 3.2.6.4.14: Create form page

Figure .2.6.4.14 above shows the create form page selected from the menu.

F.Tracking System

Welcome maha@ksau-hs.edu.sa Home Contact About

The screenshot shows a navigation sidebar on the left with links: Home page, System forms, System Track, System Track status, SETTINGS, and Account. The main area is titled 'Form Table' and contains a data table with the following columns: Username, Form note, Form remark, Form title, Form date, Form notification, Form status, Total Files, and actions. There are three entries in the table:

Username	Form note	Form remark	Form title	Form date	Form notification	Form status	Total Files	Actions
maha	nnnn	nnnn	uni	1440-11-19	<input checked="" type="checkbox"/>	Opened	No File	Edit Details Delete
maha	kkk	kkk	working	1440-11-20	<input checked="" type="checkbox"/>	Opened	No File	Edit Details Delete
maha	received at 9:00PM		receipt	1440-11-21	<input type="checkbox"/>	Opened	2 File(s)	Edit Details Delete

Showing 1 to 4 of 4 entries

Figure 3.2.6.4.15: Forms index page

Figure 3.2.6.4.15 above shows the data table for the forms created by a user.

F.Tracking System

Welcome maha@ksau-hs.edu.sa Home Contact About

The screenshot shows a navigation sidebar on the left with links: Home page, System forms, System Track, System Track status, SETTINGS, and Account. The main area is titled 'Edit form' and contains a form with fields for Select username (maha), Form title (uni), Form note (nnnn), Form remark (nnnn), Form notification (checked), Form date (11/19/1440), Status (radio buttons for Opened, Closed, Pending), and File Upload (Choose Files, No file chosen). At the bottom are Submit and Reset buttons.

Figure 3.2.6.4.16: Edit forms page

Figure 3.2.6.4.16 above shows the edit form page for the user selected from the data table.

Figure 3.2.6.4.17: Details form page

Figure 3.2.6.4.17 above shows details for a specific form selected from the data table.

Figure 3.2.6.4.18: Create track page

Figure 3.2.6.4.18 above shows the create track page selected from the menu.

The screenshot shows a user interface for a tracking system. On the left is a sidebar with navigation links: Home page, System forms, System Track, System Track status, SETTINGS, and Account. The main area is titled "Create New" and "Data Table". It displays a table with the following data:

Form title	Status trackName	Track remark	Track title	Track date	Action
receipt	closed	ooo	end	1440-11-21	Edit Details Delete
working	opened		xxx	1440-11-21	Edit Details Delete

Showing 1 to 2 of 2 entries

Figure 3.2.6.4.19: Tracks index page

Figure 3.2.6.4.19 above shows the data table for the tracks created by a user.

The screenshot shows the "Edit track" page. The sidebar is identical to Figure 3.2.6.4.19. The main area is titled "Edit track" and contains the following form fields:

- Edit track: receipt
- Select status: closed
- Track title: end
- Track remark: ooo
- Track date: 11/21/1440

At the bottom are "Submit" and "Reset" buttons, and a link "Back to List".

Figure 3.2.6.4.20: Edit track page

Figure 3.2.6.4.20 above shows the edit track page for the user selected from the data table.

The screenshot shows a delete confirmation dialog over a track form. The confirmation message is "Are you sure you want to delete this?". Below it is a "TRACK FORM" section with the following fields:

- Form title**: receipt
- Status trackName**: closed
- Track remark**: 000
- Track title**: end

The left sidebar includes links for Home page, System forms, System Track, System Track status (with sub-options Create status track and Status's table data), SETTINGS, and Account.

Figure 3.2.6.4.21: Delete track page

Figure 3.2.6.4.21 above shows the delete track page for the user selected from the data table.

The screenshot shows a "Create status track" form. The header says "Add status". The main section contains a "Track status" input field. At the bottom are "Submit" and "Reset" buttons. The left sidebar includes links for Home page, System forms, System Track, System Track status (with sub-options Create status track and Status's table data), SETTINGS, and Account.

Figure 3.2.6.4.22: Create status track

Figure 3.2.6.4.22 above shows the create status track page selected from the menu.

The screenshot shows a web application interface for a tracking system. The left sidebar has a 'SYSTEM TRACK STATUS' section with 'Status Track status' selected. The main content area is titled 'Create New' and 'Status Table'. It displays a table with four rows:

Status trackName	
closed	Edit Details Delete
on hold	Edit Details Delete
opened	Edit Details Delete

At the bottom, it says 'Showing 1 to 4 of 4 entries' and has navigation buttons for 'Previous' and 'Next'.

Figure 3.2.6.4.23: Status track index

Figure 3.2.6.4.23 above shows the data table for the status tracks created by a user.

The screenshot shows a web application interface for a tracking system. The left sidebar has a 'SYSTEM TRACK STATUS' section with 'Status Track status' selected. The main content area is titled 'TRACK STATUS' and shows a single row of data:

Status trackName	closed
------------------	--------

Below the table, there are 'Edit' and 'Back to List' links.

Figure 3.2.6.4.24: Status track details

Figure 3.2.6.4.24 above shows the details of a status track selected from the index page.

The screenshot shows a web application interface for a tracking system. The left sidebar has a 'SETTINGS' section with 'Account' expanded, showing 'Reset Password' and 'Log off'. The main content area is titled 'Change password' and contains three input fields:

- Password
- New password
- Confirm password

At the bottom, there is a link for 'Change password'.

Figure 3.2.6.4.25: Reset password page (User)

Figure 3.2.6.4.25 above shows the reset password page for the user.

3.2.6.5 Problems Faced & Solutions) (Tools and Techniques used to solve the problem)

In this task we faced different problems, the first problem we faced when we linked the system user foreign key to the register page, the register functionality stopped working, we search for a quite long time, but we could not manage to fix the issue, we reported this issue to our supervisor and she asked Eng. Abdulmalik, one the engineers in the department, we reported the issue that we faced and he helped us in understanding what is causing the issue, we were missing some references in the controller section and finally we solved the problem and the register functionality was completed. The second problem we faced when we implemented the email reminder functionality, we have written the code, but no emails were sent accordingly, later on Eng. Maryam Aldarwish told us that we need to download a new tool called Mail kit which is easier and efficient way to send emails, therefore we installed the tool and made the changes accordingly and the problem was solved.

3.2.6.6 Procedures (Steps taken to solve the problem)

- 1- Divide the search between me and my teammate.
- 2- Explain to each other what we found after searching.
- 3- Divided the styling of login page and register page.
- 4- Search and tried different ways to implement the email functionality.

3.2.6.7 Experience Gained & Techniques Learned

Achieving this task was not easy at all, I was really happy and proud by the end of this task which is submitting the project, I'm surprised that I managed to do all that, in the beginning when our supervisor assigned us to this task, we were not confident enough since the software is new to us, as well as the programming language. Step by step we learned the language easily since it is similar to the programming courses we completed in the college, we learned to depend on ourselves and solve the problems we face by searching, learned to debug the code, how to change style easily, how to download useful tools to the system, how to create a project from initial steps intro final fully functional system. I have learned a lot and enhanced my programming skills, searching skills, I have applied what I have learned in the web-based system course as well.

3.2.6.8 Tasks Accomplished & Analysis and discussion of actual results versus the expected ones

By the end of this week, we were expected to submit the final project containing all the functionality required, as well as taking an introduction about WordPress which is a new tool introduced to us, finally we successfully completed the project according to the time table we made and the final result of the system is the same as the expected results.

3.2.6.9 Relationship to academic background

What we have achieved in this task is related to different subjects which we have accomplished the same outcome of the subjects.

- 1- Database Concepts & Design.
- 2- Web based system.

3.2.7 Project/Task Seven (Data center, PC Trouble shooting)

3.2.7.1 Background

This task is divided into two useful parts, the first part is the data center, we spent the first two days of the week visiting the data center with the head of the networking department. A data center is a facility that houses information technology hardware such as computing units, data storage, and networking equipment. The main reason of using a data center in a company is to secure information technology resources. Moreover, he explained to us the different components of the data center such as racks, flooring, rows, power, structured cabling...etc. and he showed us the router that connects Alahsa to Riyadh and Jeddah. At the end he showed us 3 different devices they use to trouble shoot their cables, and to know which cable is making a trouble. The first device is a device to read and to troubleshoot the switches or devices from computers or phones. Of course, it is considered the main device in case of malfunction to identify the problem if it is from the switch or the wall socket or wire operation that is cut through which can read the IP and pool and vlan. It also works as a test for modern fiber cards. The second device is the process of reading dimensions and information access point and wireless points strength and weakness of the signal and shows you the ip and mac address. The third device used to troubleshoot cables, it includes 3 numbers that identify which cable is broken. The second part is the PC trouble shooting which falls under the category of user support, we visited the college of nursing to trouble shoot their PC'S in their labs. Ms. Masheal Alnuiam provided us with PPM which stands for preventive maintenance report including different columns such as: check connectivity to KSUH domain, check accessibility to the WWW, check and update the anti-virus software, run Symantec antivirus and delete viruses and worms found, delete all user accounts from the PC except (Admin), test the headset, status, and notes. We spent the rest of the week visiting the college of nursing to trouble shoot their PCs and fill the report, each lab contains 47 PCs each trainee was assigned 6 computers to check at a time, and when we finish the 6 we complete another 6 until the lab is fully checked.

3.2.7.2 Approach /Objective

To achieve this task, I conducted an extra research to learn more about the data center components, so I don't forget what I have seen & learned, moreover to complete the PC trouble shooting task we had 47 PC per lab, which is a lot and it takes a long time to check each PC, so we needed to cooperate, we decided each trainee should take a row and check their PC's, and we open 3 different computers at the same time and check on them so it saves time if each one takes a long time to open, to check viruses, and updates.

3.2.7.3 Data Collection, analysis and requirements (Software, Hardware)

For the hardware, routers, switches, racks, cables, PC's

For the software, Symantec antivirus software.

3.2.7.4 Model & Photos



Figure 3.2.7.4.1: Fluke Networks 1T-3000 OneTouch AT Test Copper/Fiber LAN/WiFi/IL

Figure 3.2.7.4.1 above represents a device to read and to troubleshoot the switches or devices from computers or phones. Of course, is it considered the main device in case of malfunction to identify the problem if it is from the switch or the wall socket or wire operation that is cut through which can read the IP and pool and vlan. It also works as a test for modern fiber cards.



Figure 3.2.7.4.2: Fluke Networks LRAT-2000-FTK LinkRunner AT 2000 Fiber Tester

Figure 3.2.7.4.2 above represents a device which includes the process of reading dimensions, information access point, wireless points strength and weakness of the signal and shows you the ip and mac address.



Figure 3.2.7.4.3: IntelliTone Pro 200 LAN Toner and Probe Kit, Fluke Networks

Figure 3.2.7.4.3 above represents a device that is used to troubleshoot cables, it includes 3 numbers that identify which cable is broken.

3.2.7.5 Problems Faced & Solutions) (Tools and Techniques used to solve the problem)

The first problem we faced is when the PC does not connect to the internet, Ms.Masheal explained to us how to fix this issue, first I should open any browser (I used google chrome), then from the settings I choose advanced settings, under system I pressed open proxy settings, after that a window is open containing different menus, used the connections menu I pressed LAN settings and checked use automatic configuration script, then I entered a link Ms.Masheal provided us with, then I press ok, close the browser and open it again, then the internet works. The other problem was with the antivirus software, when I opened it to check viruses it shows a mark that the software needs to be updated before proceeding, so I pressed fix issues, waited a while then the software was updated, and then I ran an active scan for the PC.

3.2.7.6 Procedures (Steps taken to solve the problem)

- Data center:
 - 1- We visited the data center to learn new information about the hardware used.
 - 2- I conducted an extra research to note what I have learned.
- PC trouble shooting:
 - 1- First, we divided the PC's to be checked by us.
 - 2- We were provided with the computer laboratories monthly PPM report.
 - 3- We opened 2 or 3 PC's at time as they take long time to open and process.
 - 4- According to the report, first, we check connectivity to KSUH domain which means when the PC is logged in, it is connected.
 - 5- Check accessibility to the WWW, and if it does not work, we were provided steps to fix it from the settings of the browser.
 - 6- Check and update the anti-virus software.
 - 7- Run Symantec antivirus and delete viruses and worms found.
 - 8- delete all user accounts from the PC except (Admin). I pressed right click on computer, properties, advanced system settings, user profiles, and delete each one.
 - 9- Test the headsets.
 - 10- Status, which is the status of the computer, we should write W for working and NW for not working.

3.2.7.7 Experience Gained & Techniques Learned

This task was new to me, so I learned a lot of different techniques, skills, information. For the data center I have learned about its different components, such as the racks which includes all the IT equipment in data center, housed in standardized racks known as 19-inch racks. These racks are filled with various computing, storage and network hardware, also flooring, all data centers have a raised flooring. A raised floor is an artificial floor, usually made of floor tiles that rest on top of pedestals. The floor tiles are removable, allowing engineers to lift them and gain access to the void between the raised floor and the solid floor beneath. This void floor is commonly used to route network cables and power cables and as well as potentially channel cold air, the rows, in most data centers, racks are organized into rows. In this manner, racks can easily be located by giving their row location as well as their rack location, another component is the power which is the most important component to make any data center running without failure. It is not just the servers, storage and networking equipment that suck the power. Heating, ventilation and air conditioning (HVAC) systems consume a lot of power. Modern data centers consume huge amounts of electricity and often have backup generators on-site that can provide electricity in the event that utility power is lost. Cooling is another important component of a data center to keep the IT equipment cool and running. To reduce amount of energy required to keep equipment cool, most data centers operate on a form of the hot/cold aisle principle. And structured cabling, cabling is a vital component of the data center [3]. Moreover, I learned how to fix internet connections, update antivirus software, scan the system for threats and worms, delete users account that take a lot of space.

3.2.7.8 Tasks Accomplished & Analysis and discussion of actual results versus the expected ones

The tasks accomplished is the tour in the building visiting the data centers, to learn the different components and understand their process, and the PC trouble shooting, the expected results were to learn about the data center's components, how they operate, and how to learn to trouble shoot PC's and check different parts according to the PPM report. Finally, by the end of the task we have achieved the expected results and learned new information and techniques.

3.2.7.9 Relationship to academic background

This task relates to different subjects taken in college, the outcome of the subjects matched the techniques I have learned in this task.

- 1- Networking
- 2- Protocols

3.2.8 Project/Task Eight (*Creating my resume using WordPress*)

3.2.8.1 Background

By the beginning of the week, we had two days left before the Eid holiday, according to the plan we had PC trouble shooting, but we finished by the end of the previous week. So, I decided to create my own task which is creating a resume website using WordPress. As I mentioned in the previous tasks that we took an introduction about WordPress which was an extra task and optional. Moreover, I had to search all over again how to download WordPress since we learned how to install it in windows, but my personal device is mac, therefore I have downloaded it on my laptop, after that I needed to connect it to a server, I already have XAMPP downloaded in my device, so I search how to connect WordPress with XAMPP. I watched a tutorial to establish the connection and open WordPress on local host and I did it correctly. After I have established the connections and had access to the WordPress, I searched what are the best resume templets to download, I found resume builder then I downloaded it from the plugins section, it included different sections to fill up such as educations, skills...etc. after that one step was left which is publish and the page is created. Moreover, I needed to change the layout of different parts, so I searched how to do that part, I learned that I needed to download a plugin named Elementor, which gives me the accessibility to change the layout of different sections, and to add extra sections such as heading, sub-heading and more. I spent a lot of time in searching since I have never used this tool and finally, I have created my resume.

3.2.8.2 Approach /Objective

The approach I used to accomplish this task was to search, since I had no idea about how to use this tool, moreover, I found a lot of servers to download WordPress with, but I needed to save time and find what I already have and search specifically how to connect WordPress with the server already installed in my system which is XAMPP. My objective was to apply what I have learned from college and reuse installed software's in my system, and to self-learn and search by myself and do an extra task, explore new tools to enhance my technical skills and create something useful and fun

3.2.8.3 Data Collection, analysis and requirements (Software, Hardware)

For the hardware is PC.

For the software, WordPress, XAMPP server, PHP my admin.

3.2.8.4 Model & Photos

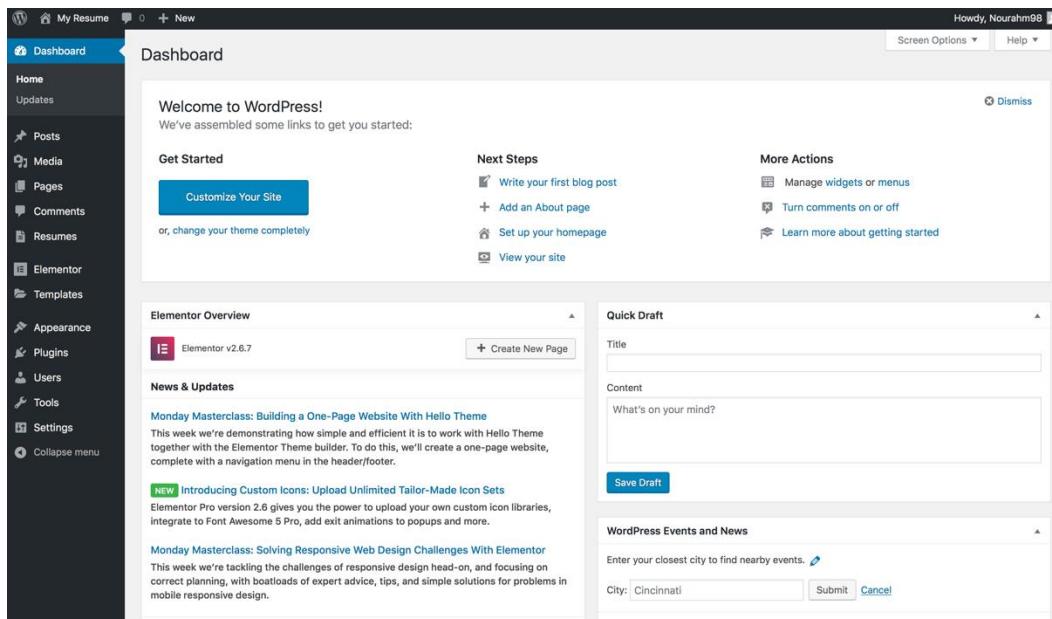


Figure 3.2.8.4.1: Dashboard page for the WordPress

Figure 3.2.8.4.1 above shows the dashboard of the WordPress logged in by as a user.



Norah Hamad AlShaikhMubarak

Developer & Designer

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AR Rawdah Alhufuf and Almubarraz

A computer science student, passionate about my major, always looking for new opportunities and for chances to participate and compete in competitions to prove my ability to accomplish my goals under challenging conditions.

Always seeking to learn new topics that are related to my major.

Interested in programming, mobile development, web development, solving problems, designing, and digital art.

Skills

Public Speaking

Teamwork

Writing

Software

Microsoft Office

ASP.NET MVC

Programming languages

Android Development

Swift (Programming Language)

Web Development

Databases

Python (Programming Language)

Cascading Style Sheets (CSS)

JavaScript

HTML

PHP

Social Media

Java

Education

King Faisal University

Computer Science

2016-2020

Experience

King Saud bin Abdulaziz University for Health Sciences

Trainee

May 2019 – Present

Training at (KSAU-HS) has enhanced my theoretical and practical knowledge in the computer science field.

HTML

PHP

Social Media

Java

Experience

Misk Foundation

Saudi-Codes ambassadors

Dec 2018 – Apr 2019

This experience enhanced my programming skills, starting by taking 5 different tests in different programming languages in order to be one of the saudi codes ambassadors. I got involved in a programming community, providing new useful topics, reading topics, helping people in solving their programming problems and many activites that enhaces the problem solving skills.

Accomplishments & Awards

University of Hail

2nd National Programming Competition

Jan 2019

I have participated in the 2nd National Programming Competition started in january 2019 and conducted in 2nd National Programming Competition , I was nomited to move to the Hail for and to implement an applications that solves a problems, finally I won the 3rd place in the 2nd National Programming Competition.

King Faisal University

Smart Application Competition

March 2019

I have participated in Smart Application Competition, and thankfully I have won first place in the field of hygiene.

Figure 3.2.8.4.2: Screenshot of my resume (WordPress)

Figure 3.2.8.4.2 above show the resume I created using WordPress.

3.2.8.5 Problems Faced & Solutions) (Tools and Techniques used to solve the problem)

The first problem I faced is when I log in to my account, I get different lines of warnings and errors, I copied the lines of errors and searched about them to find solutions, I found using stack over flow website a solutions that says I needed to add one line in one of WordPress files to fix the issues and it worked, the second problem I faced when I downloaded a plugin it shows a error that says could not create file directory, I searched a lot I needed to understand the issue, there was problem with accessibility so I went to the admin folder, changes the write & read options to everyone, and I was able to download plugins.

3.2.8.6 Procedures (Steps taken to solve the problem)

- 1- I have downloaded WordPress on mac.
- 2- Connected WordPress to a local server which is XAMPP.
- 3- Created a database on PHP my admin named WordPress.
- 4- Opened localhost/wordpress/wp-admin then I created an account.
- 5- Logged in to the account and I had access to the dashboard of WordPress.
- 6- Searched about different plugins.
- 7- Downloaded the resume plugin and worked on it.

3.2.8.7 Experience Gained & Techniques Learned

By the end of this task I have enhanced my searching, self-learning, problem solving skills. Moreover, I gained experience in a new useful tool which is WordPress and created an interactive resume.

3.2.8.8 Tasks Accomplished & Analysis and discussion of actual results versus the expected ones

The task I have accomplished was chosen by me, so I decided to do my resume using WordPress. Step by step and through a research I completed my task as expected.

3.2.8.9 Relationship to academic background

This task relates to different subjects taken in college, the outcome of the subjects matched the techniques I have learned in this task.

- 1- Web based systems.
- 2- Database Concepts & Design.

3.2.9 Project/Task nine (User support)

3.2.9.1 Background

Reaching the end of training period, we had one week left which included the user support unit, which is a **service** to assist **users** in making correct use of a product. It includes assistance in planning, installation, training, troubleshooting, maintenance, upgrading, and disposal of a product. We started the week by visiting the college of nursing with Ms. Norah AlOtaibi she is responsible for the sounds and visions, she explained to us her work nature and taught us how to check on the projectors, smart boards, and other equipment, we needed to check whether they are working or not, check their sounds, their vision, also we learned how to trouble shoot the problems and understand which problem mean. Each projector works up to 4000 times then it shows an alarm that the lamp needs to change, also the smart board works 2000 times then it shows an alarm that the lamp needs to change. Moreover, we checked on each lab and made sure everything is working accordingly otherwise we report an issue and fill out a work order form to the maintenance unit to fix the issue. Mostly they need to check on the equipment before the year starts or before an even to make sure everything is working. Moreover, we had an introduction about the user support system that is being used in the IT services department, they should us how the system works, how to deal with problems and fix issues, how to receive orders. Along with this task we were requested to write a report that summarizes our work experience to submit it to the IT services department by the end of the week.

3.2.9.2 Approach /Objective

This approach we used to accomplish this task is to divide the work between us the trainees, we decided that each 2 students should check on one lab, and then we pass over what we have done, or fixed or what problem we faced, and then we report what we have finished to Ms. Norah AlOtaibi.

3.2.9.3 Data Collection, analysis and requirements (Software, Hardware)

For the hardware, we used PC, projector, smart board, remote control.

For the software, we used user support system.

3.2.9.4 Model & Photos

N/A

3.2.9.5 Problems Faced & Solutions) (Tools and Techniques used to solve the problem)

We faced a problem while turning on one of the projectors, it was unclear and the image was blurry, so we asked what the problem was and indicated that lamp needs to be replaced, so we filled a work order form and written the lab number which included the projector that needs to be fixed.

3.2.9.6 Procedures (Steps taken to solve the problem)

- 1- We dived the labs among us, each 2 students work in one lab.
- 2- We passed the information along each other and explained what we have done and learned.
- 3- We filled out a work order form whenever we faced a problem that needs the maintenance team.
- 4- We checked on the labs and written what we have accomplished to our supervisor.

3.2.9.7 Experience Gained & Techniques Learned

This task included a lot of new skills, I learned how to work with projectors, smart boards and other related equipment, I learned how to check on sound, vision, also how to trouble shoot the problems and understand what is causing issues, learned how to fix cables, and how to report and fill work order form.

3.2.9.8 Tasks Accomplished & Analysis and discussion of actual results versus the expected ones

In this task, we were supposed to learn about the user support system in the IT services department and understand how they operate, also we were supposed to check on each lab in the college of nursing and report the issues we have found, and we needed to write a report and submit it to the IT services, by the end of the week we finished checking on the labs, learned about the system and written a report and submitted it to the IT services department.

3.2.9.9 Relationship to academic background

This task relates to different subjects taken in college, the outcome of the subjects matched the techniques I have learned in this task.

- 1- Networking.
- 2- Protocols.
- 3- Professional responsibility.
- 4- Technical report.

3.2 List and describe your pending tasks from the past weeks (if any) along with their reasons.
No pending tasks, all tasks have been completed according to the plan given to us.

3.3 Task Plan for the next remaining weeks (if any). Also, mention the activities you will carry out to accomplish the task's objectives. (Ask your site supervisor if necessary).

N/A.

4. Conclusions and Recommendations

Cooperative training is very beneficial for college students, as it enhances our skills, apply what we have learned throughout college courses, prepare us for the workplace, learn and experience new topics.

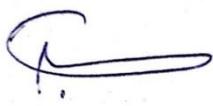
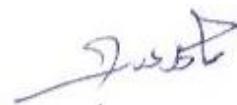
Reaching the end of this report, we have covered an introduction about the nature of the work in the King Saud bin Abdul-Aziz University for Health Sciences (KSAU-HS). The different programs they offer for their trainees, starting with the application unit which is the first unit that we started working on, a user support unit, system unit, and network unit. Following up with the description of the company and the department of IT services. Furthermore, we have discussed three different tasks in the first 9 weeks, starting with the welcoming and introduction of the programs, the nature of the work, and the project that we will implement. Moreover, we have started task 2 by analyzing the system from the initial designs of the flowcharts, ER diagrams, and the interfaces and ending with the final designs using different tools such as Lucid chart, Marvel app. By the third task, we started by setting up and testing on visual studio and learning the main components of visual studio until we are ready for implementation. The next 4 weeks were challenging, we started implementing the system and since the system is huge and we are teams of two students, we needed to create a time table of the work which was a request also from our supervisor. We followed the time table and we each Thursday we represent what we did to our supervisor and we get assigned for what we have accomplished. Step by step we finally achieved and submitted the system. The department's staff and our supervisor were happy with the results, they gave us positive comments and wished the best for us. Moreover, in the last 3 weeks we learned new things, such as the networking unit and user support unit which included the PC trouble shooting.

In my experience, training at KSAU-HS is beneficial in many ways, they gave me the opportunity to build a system, learn how to use new software which is visual studio, learn how to program using new language which is C sharp, learn about the networking unit and how to trouble shoot problems, learn about the user support unit and how to trouble shoot PC's, I also experienced new tool which is WordPress and I created my resume as a website. I recommend students to join KSAU-HS training program since I managed to enhance my programming skills, searching skills, self-learning and I applied what I learned in college practically.

References

- [1] About Us. (n.d.). Retrieved from <https://www.ksau-hs.edu.sa/English/AboutUs/Pages/About.aspx>
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- [3] Ommi, A. K. (1970, January 01). 1.4 IT Data Center Design and its Components. Retrieved from <http://www.tsmtutorials.com/2016/06/data-center-design.html>

SIGNATURES

Name	Designation	Signature	Date
Norah AlShaikhMubarak	Student		29/8/2019
Eng. Monera Alhumam	Site Supervisor		29/8/2019

Faculty Advisor Comments

Appendices

King Saud bin Abdulaziz University
for Health Sciences



جامعة الملك سعود بن عبد العزيز للعلوم الصحية
للمعاهدة الصحية

OFFICE OF THE MANAGER
INFORMATION TECHNOLOGY SERVICES & HEALTH INFORMATICS
(ITS&HI) AL-HASSA
Eastern Region

18th August 2019
17th Dul'Hijjah 1440H

Letter of Appreciation- Internship Achievers

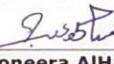
To Whom It May Concern:

This letter of appreciation is given to: **Nourah Hamad AlSheikh, TR ID # T3967** based on her excellent performance during these 12 weeks long "Internship Course" held at King Saud University for Health Science under Information Services and Health Informatics (ITS S&HI) Department -Alhasa campus.

I was so impressed the way she carries and performed given tasks with her full dedications that justifies her potential capabilities. Bestowed exemplary learning skills during class sessions and proved to be an excellent achiever that will surely contributes truly great deal of satisfaction and achievements for her future endeavors in life.

Given this, 28th July 2019




Engr. Moneera AlHumam
Training Supervisor


Engr. Abdulrahman AlNuaim
KSAU-HS, IT Service & Health Informatics – Manager-AlHasa