

Khulna University of Engineering & Technology KUET

EE 1222 Report

Department of Electrical & Electronic
Engineering

Project name Pathways to a Harassment-
free Environment

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Year:1st

Semester:2nd

Objectives :

The student portal system appears to have been developed with the following objectives:

- (i) Provide a secure and efficient way for students to register and log in to the system.
- (ii) Offer students a platform to report harassment incidents and receive immediate support and information.
- (iii) Facilitate interaction with important student services, such as:
 - Anti-harassment response.
 - Mental health consultation.
 - Academic assistance and career counseling.
- (iv) Create a single point of access for various student services, improving accessibility and utilization of these resources.
- (v) Gather and store relevant information about student interactions with different services for potential future analysis and improvement of student support systems.
- (vi) Facilitate direct communication between students and relevant faculty or support staff.

Introduction :

C is a high-level, general-purpose programming language developed by Dennis Ritchie at Bell Labs in the early 1970s. It is a foundational programming language that has had a significant impact on the development of software and other languages. The provided code of our project implements a student portal system in C. This system offers functionalities for user registration, login, and access to various student services including anti-harassment response, mental health care, and academic consultancy.

Header Files and Main Functions:

In C programming, a header file is a file that contains declarations for functions, constants, and data types that are shared between multiple source files. The header files and main functions used in this project are given below:

- (i) The header file `"#include<stdio.h>"` provides essential functions for input and output operations, including `printf` for output, `scanf` for input, and file handling functions like `fopen` and `fprintf`. It is fundamental for interacting with the user and files.

- (ii) `stdlib.h` includes utility functions for memory management, process control and conversions.
- (iii) The header “`#include <string.h>`” provides functions for manipulating strings, such as `strlen` (to find string length), `strcmp` (to compare strings), and `strcpy` (to copy strings).
- (iv) `time.h` offers functions for time and date operations, including retrieving the current time (`time`) and formatting it.

Data Types:

In C programming, data types are used to specify the type of data a variable can hold. They play a crucial role in determining how much memory a variable will use and what kind of operations can be performed on it.

In this code, `char` is used for storing single characters and strings (e.g., `char name[100]`, `char phoneNumber[12]`), `int` is used for integer values (e.g., `int roll`), and `struct` is used to group related data into a single entity (`struct User`). `FILE*` handles file operations (e.g., `FILE *file`), `void` indicates functions that do not return a value (e.g., `void registerUser(struct User *user)`), and `int` as a return type is used for functions that return integer values (e.g., `int loginUser(struct User *user)`).

Variables:

In C programming, a variable is a storage location in memory that has a name and a type. It is used to hold data that can be manipulated during the execution of a program.

In this code, `user` is a pointer to a `struct User` used to manage user information. The `struct User` contains `name`, `password`, `department` (all `char[100]` for storing strings), `roll` (an `int` for the roll number), and `phoneNumber` (`char[12]` for the phone number). `inputName` and `inputPassword` are temporary `char[100]` arrays used during login. `option` and `timeOption` are `int` variables used to capture user choices for various menu options and counseling times. `file` is a `FILE*` pointer used for handling file operations.

Functions:

In C programming, a function is a block of code that performs a specific task and can be executed when called. Functions are fundamental to structuring and organizing C programs, allowing to break down complex tasks into simpler, reusable components.

The following functions are used in this code:

1. **registerUser(struct User *user)**: Collects and stores user registration details.
2. **loginUser(struct User *user)**: Authenticates the user by checking their name and password.
3. **recordAntiHarassmentResponse(struct User *user)**: Records user reports related to harassment into a file.
4. **recordMentalHealthResponse(struct User *user)**: Records user responses for mental health care into a file.
5. **academicConsultancy()**: Provides information on academic consultancy options based on user choice.

File Handling:

File handling in C involves the processes of creating, opening, reading, writing, and closing files using functions from the `stdio.h` header. This functionality is crucial for storing and retrieving data persistently beyond the program's runtime.

The code uses the following files:

1. **Anti_Harassment_Response.txt**:

Stores records of user reports related to harassment. The file includes details such as the user's name, department, roll number, phone number, and the type of harassment reported.

2. **Mental_Health_Response.txt**:

Stores records of user responses regarding mental health care. It includes user details and their preferences for counseling or suicide prevention support, along with preferred counseling times if applicable.

Benefits of this project :

The code provides several benefits:

1. **User Management**: Facilitates user registration and login, allowing users to securely access various services.
2. **Harassment Reporting**: Enables users to report harassment incidents, helping to address and document such issues effectively.

3. **Mental Health Support:** Offers options for mental health care, including counseling and suicide prevention, and records user preferences for timely support.
4. **Academic Consultancy:** Provides access to academic consultancy services, offering assistance with specialized academic needs and career counseling.
5. **Data Recording:** Records user responses and service requests in files, which can be useful for tracking and follow-up.
6. **User-Friendly:** Provides a simple, text-based interface that is easy to navigate and understand, making it accessible for users who may not be familiar with complex systems.

Code :

```
#include <stdio.h>
```

```
#include <stdlib.h>
```

```
#include <string.h>
```

```
#include <time.h>
```

```
struct User {
```

```
    char name[100];
```

```
    char password[100];
```

```
    char department[100];
```

```
    int roll;
```

```
    char phoneNumber[12];
```

```
};
```

```
void registerUser(struct User *user) {
```

```
    printf("\nEnter your name: ");
```

```
    fflush(stdin);
```

```
    fgets(user->name, sizeof(user->name), stdin);
```

```
    user->name[strlen(user->name) - 1] = '\0';
```

```

printf("Create a password: ");

fflush(stdin);

fgets(user->password, sizeof(user->password), stdin);

user->password[strlen(user->password) - 1] = '\0';


printf("Enter your department: ");

fflush(stdin);

fgets(user->department, sizeof(user->department), stdin);

user->department[strlen(user->department) - 1] = '\0';


printf("Enter your roll number: ");

scanf("%d", &user->roll);


printf("Enter your phone number (11 digits): ");

scanf("%s", user->phoneNumber);


if (strlen(user->phoneNumber) != 11) {

    printf("\nInvalid phone number. Please enter exactly 11 digits.\n\n");

    registerUser(user);

}

}

int loginUser(struct User *user) {

    char inputName[100];

```

```
char inputPassword[100];

printf("\nEnter your name: ");

fflush(stdin);

fgets(inputName, sizeof(inputName), stdin);

inputName[strlen(inputName) - 1] = '\0';

printf("Enter your password: ");

fflush(stdin);

fgets(inputPassword, sizeof(inputPassword), stdin);

inputPassword[strlen(inputPassword) - 1] = '\0';

if (strcmp(inputName, user->name) == 0 && strcmp(inputPassword, user->password) == 0) {

    return 1;

} else {

    printf("\nLogin failed. Please check your name and password.\n");

    return 0;

}

}

void recordAntiHarassmentResponse(struct User *user) {

    int option;

    printf("\nAnti-Harassment Committee:\n");
```

```
printf("Dr. Md. Selim Islam\n");

printf("Chairman\n");

printf("Anti-harassment Committee\n");

printf("Email: mrislam@kuet.ac.bd\n\n");

printf("Advocate Mr. SM Alam\n");

printf("Member Secretary & Human Rights Activist\n");

printf("Email: mralam@kuet.ac.bd\n\n");

printf("Dr.Jannat Ara\n");

printf("Chairman of Anti-Sexual Harassment Committee\n");

printf("& Social Activist\n");

printf("Email: jannatara@kuet.ac.bd\n\n");


printf("Select the type of harassment:\n");

printf("1. Verbal & Online Teasing\n");

printf("2. Sexual Harassment\n\n");

printf("Enter your choice (1 or 2): ");

scanf("%d", &option);


FILE *file = fopen("Anti_Harassment_Response.txt", "a");

if (file == NULL) {

    printf("Error opening file.\n");

    return;

}
```



```
fprintf(file, "User: %s\n", user->name);

fprintf(file, "Department: %s\n", user->department);

fprintf(file, "Roll: %d\n", user->roll);

fprintf(file, "Phone Number: %s\n", user->phoneNumber);


switch(option) {

    case 1:

        fprintf(file, "Harassment Type: Verbal & Online Teasing\n");

        printf("\nYou have reported verbal & Online teasing.\n");

        break;

    case 2:

        fprintf(file, "Harassment Type: Sexual Harassment\n");

        printf("\nYou have reported sexual harassment.\n");

        break;

    default:

        fprintf(file, "Harassment Type: Unspecified\n");

        printf("\nInvalid option. Your response is recorded as unspecified.\n");

}


fclose(file);


printf("Your response has been recorded.\n");
```

```

printf("For emergency:\n");

printf("Contact: 01797809** \t01521747**\n\n");

printf("If you don't contact within 30 minutes, the Anti Harassment committee will contact
you.\n\n");

}

void recordMentalHealthResponse(struct User *user) {

    int option, timeOption;


    printf("\nMentalHealthResponse\n");

    printf("1. Counselling\n");

    printf("2. Suicide Prevention\n");

    printf("Enter your choice: ");

    scanf("%d", &option);


    switch (option) {

        case 1:

            printf("Dr.MK Zaman \nMBBS(DMC),FCPS(Psychiatry) \nEmail:mkzaman@gmail.com
\nWhatsApp NO:0179780**** \n\n");

            printf("Dr. C Roy \nMBBS(DMC),MD(Psycho-Sexual Disorder)
\nEmail:croy66@gmail.com \nWhatsApp NO:0189856**** \n\n");

            printf("To visit physically for counselling, select your preferable time:\n");

            printf("1. 10am to 12pm\n");

            printf("2. 3pm to 5pm\n");

            printf("3. 7pm to 9pm\n");

            printf("Enter your choice: ");

```

```
scanf("%d", &timeOption);
```

```
break;
```

```
case 2:
```

```
printf("For emergency: \nContact: 998** \t345**\n\n");
```

```
printf("Contact Immediately.This numbers are free for suicide prevention.We may talk to  
the suicidal person\n\n");
```

```
break;
```

```
default:
```

```
printf("Invalid option.\n");
```

```
return;
```

```
}
```

```
FILE *file = fopen("Mental_Health_Response.txt", "a");
```

```
if (file == NULL) {
```

```
printf("Error opening file.\n");
```

```
return;
```

```
}
```

```
fprintf(file, "User: %s\n", user->name);
```

```
fprintf(file, "Department: %s\n", user->department);
```

```
fprintf(file, "Roll: %d\n", user->roll);
```

```
fprintf(file, "Phone Number: %s\n", user->phoneNumber);
```

```

if (option == 1) {
    switch (timeOption) {
        case 1:
            fprintf(file, "Preferable Time: 10am to 12pm\n");
            break;
        case 2:
            fprintf(file, "Preferable Time: 3pm to 5pm\n");
            break;
        case 3:
            fprintf(file, "Preferable Time: 7pm to 9pm\n");
            break;
        default:
            printf("Invalid time option.\n");
            fclose(file);

            printf("Your response is recorded. Visit KUET Medical Centre(Room:103) at the right
time.\n");
            return;
        }
        fclose(file);

        printf("Your response is recorded. Visit KUET Medical Centre(Room:103) in right time .\n");

    } else if (option == 2) {
        printf(file, "No specific time slot selected for suicide prevention.\n");
    }
}

```

```

}

void academicConsultancy() {

    int option;


    printf("\nAcademic Consultancy:\n");

    printf("1. Specialized academics assistance\n");

    printf("2. Career counseling\n");

    printf("3. Academic policy guidance\n");

    printf("Enter your choice: ");

    scanf("%d", &option);


    switch (option) {

        case 1:

            printf("\nSelect your faculty:\n");

            printf("1. Civil Faculty\n");

            printf("2. EEE Faculty\n");

            printf("3. ME Faculty\n");

            printf("Enter your choice: ");

            scanf("%d", &option);

            switch (option) {

                case 1:

                    printf("\nCivil Faculty: \nDr. Sajid Hasan \nProfessor \nDepartment of Civil Engineering\nEmail:hasan@kuet.ac.bd \nAvailable Time:Monday(5pm-7pm) Room:ME Building-301\n");

```

```
printf("\nDr.Raju Islam \nProfessor \nDepartment of Architechture
\nEmail:raju@kuet.ac.bd \nAvailable Time:Thursday(2.30pm-5pm) Room:Architecture
Building-203\n");
```

```
break;
```

```
case 2:
```

```
printf("\nEEE Faculty:\nDr. Rahman \nProfessor \nDepartment of Electrical & Electronic
Engineering \nEmail:rahman.eee@kuet.ac.bd \nAvailable Time:Monday(5pm-7pm) Room:EEE
Building-301\n");
```

```
printf("\nDr.Kudrat Zaman\nProfessor \nDepartment of Biomedical Engineering
\nEmail:zaman@kuet.ac.bd \nAvailable Time:Thursday(2.30pm-5pm) Room:204 Academic
Building(Block-c)\n");
```

```
break;
```

```
case 3:
```

```
printf("\nME Faculty\nDr.Fateulah Mostofa\nProfessor \nDepartment of Mechanical
Engineering \nEmail:fateullah@kuet.ac.bd \nAvailable Time:Monday(5pm-7pm) Room:ME
Building-301\n");
```

```
printf("\nDr.Motin Chowdhury \nProfessor \nDepartment of Chemical Engineering
\nEmail:motin@kuet.ac.bd \nAvailable Time:Thursday(2.30pm-5pm) Room:204 Academic
Building(Block-D)\n");
```

```
break;
```

```
default:
```

```
printf("Invalid option.\n");
```

```
break;
```

```
}
```

```
break;
```

case 2:

```
printf("\nCareer counseling with:\nEngg. Mr. Chowdhury \nProcess Engineer \nIntel Corporation \nWhatsApp: 0179825** \nAvailable Time:Friday(7pm-10pm)\n");
```

```
printf("\nEngr. Mr. Hossain \nLife-time member \nKuet Career Club \nWhatsApp: 0149687** \nAvailable Time:Saturday(10am-1pm)\n");
```

```
break;
```

case 3:

```
printf("\nAcademic policy guidance:\nMr. Zaman \nHead of the Guidance \nStudent Well-fare Centre \nEmail:zamannn@kuet.ac.bd \nAvailable Time:(10am-1pm)& (3pm-5pm)\n");
```

```
break;
```

default:

```
printf("Invalid option.\n");
```

```
break;
```

```
}
```

```
}
```

```
int main() {
```

```
    struct User user;
```

```
    int choice;
```

```
    while (1) {
```

```
        printf("\nWelcome to the portal!\n");
```

```
        printf("1. Register\n");
```

```
printf("2. Login\n");

printf("3. Exit\n");

printf("Enter your choice: ");

scanf("%d", &choice);


switch (choice) {

    case 1:

        registerUser(&user);

        printf("\nYour registration is successful!\n");

        break;

    case 2:

        if (loginUser(&user)) {

            int option;

            printf("\nLogin successful!\n");

            do {

                printf("\nSelect an option:\n");

                printf("1. Anti-Harassment Response\n");

                printf("2. Mental Health Care\n");

                printf("3. Academic Consultancy\n");

                printf("4. Logout\n");

                printf("Enter your choice: ");

                scanf("%d", &option);
```



```

switch (option) {
    case 1:
        recordAntiHarassmentResponse(&user);
        break;
    case 2:
        recordMentalHealthResponse(&user);
        break;
    case 3:
        academicConsultancy();
        break;
    case 4:
        printf("Logged out.\n");
        break;
    default:
        printf("Invalid option.\n");
        break;
}

} while (option != 4);

}

break;

case 3:

    printf("\nThank You\n");

    printf("\nProgrammed by \nSumaiya Khan(2203061) \nKhadiza Farhin(2203065)
\nNoshin Farjana(2203066)\n");

```

```
        return 0;

    default:

        printf("Invalid choice. Please try again.\n");

        break;

    }

}
```

```
    return 0;

}
```

Welcome to the portal!

1. Register
2. Login
3. Exit

Enter your choice: 1

Enter your name: Noshin

Create a password: 3kf5

Enter your department: EEE

Enter your roll number: 2203066

Enter your phone number (11 digits): 01234567899

Your registration is successful!

Welcome to the portal!

1. Register

2. Login

3. Exit

Enter your choice: 2

Enter your name: Noshin

Enter your password: 3kf5

Login successful!

Select an option:

1. Anti-Harassment Response

2. Mental Health Care

3. Academic Consultancy

4. Logout

Enter your choice: 1

Anti-Harassment Committee:

Dr. Md. Selim Islam

Chairman

Anti-harassment Committee

Email: mrislam@kuet.ac.bd

Advocate Mr. SM Alam

Member Secretary & Human Rights Activist

Email: mram@kuet.ac.bd

Dr.Jannat Ara

Chairman of Anti-Sexual Harassment Committee

& Social Activist

Email: jannatara@kuet.ac.bd

Select the type of harassment:

1. Verbal Teasing
2. Sexual Harassment

Enter your choice (1 or 2): 2

You have reported sexual harassment.

Select an option:

1. Anti-Harassment Response
2. Mental Health Care
3. Academic Consultancy

4. Logout

Enter your choice: 2

MentalHealthResponse

1. Counselling

2. Suicide Prevention

Enter your choice: 1

Counselling:Dr.Karim

To visit physically for counselling, select your preferable time:

1. 10am to 12pm

2. 3pm to 5pm

3. 7pm to 9pm

Enter your choice: 3

Your response is recorded. Visit KUET Medical Centre(Room:103) in right time .

Select an option:

1. Anti-Harassment Response

2. Mental Health Care

3. Academic Consultancy

4. Logout

Enter your choice: 2

MentalHealthResponse

1. Counselling

2. Suicide Prevention

Enter your choice: 2

For emergency:

Contact: 998** 345**

Contact Immediately. These numbers are free for suicide prevention. We may talk to the suicidal person

ðëp

Select an option:

1. Anti-Harassment Response

2. Mental Health Care

3. Academic Consultancy

4. Logout

Enter your choice: 3

Academic Consultancy:

1. Specialized academics assistance

2. Career counseling

3. Academic policy guidance

Enter your choice: 3

Academic policy guidance:

Mr. Zaman

Head of the Guidance

Student Well-fare Centre

Email:zamannn@kuet.ac.bd

Available Time:(10am-1pm)& (3pm-5pm)

Select an option:

1. Anti-Harassment Response
2. Mental Health Care
3. Academic Consultancy
4. Logout

Enter your choice: 1

Anti-Harassment Committee:

Dr. Md. Selim Islam

Chairman

Anti-harassment Committee

Email: mrislam@kuet.ac.bd

Advocate Mr. SM Alam

Member Secretary & Human Rights Activist

Email: mramlam@kuet.ac.bd

Dr.Jannat Ara

Chairman of Anti-Sexual Harassment Committee

& Social Activist

Email: jannatara@kuet.ac.bd

Select the type of harassment:

1. Verbal Teasing
2. Sexual Harassment

Enter your choice (1 or 2): 1

You have reported verbal teasing.

Select an option:

1. Anti-Harassment Response
2. Mental Health Care
3. Academic Consultancy
4. Logout

Enter your choice: 3

Academic Consultancy:

1. Specialized academics assistance
2. Career counseling
3. Academic policy guidance

Enter your choice: 1

Select your faculty:

1. Civil Faculty
2. EEE Faculty
3. ME Faculty

Enter your choice: 1

Civil Faculty:

Dr. Sajid Hasan

Professor

Department of Civil Engineering

Email:hasan@kuet.ac.bd

Available Time:Monday(5pm-7pm) Room:ME Building-301

Dr.Raju Islam

Professor

Department of Architecture

Email:raju@kuet.ac.bd

Available Time:Thursday(2.30pm-5pm) Room:Architecture Building-203

Select an option:

1. Anti-Harassment Response
2. Mental Health Care
3. Academic Consultancy
4. Logout

Enter your choice: 3

Academic Consultancy:

1. Specialized academics assistance
2. Career counseling
3. Academic policy guidance

Enter your choice: 2

Career counseling with:

Engg. Mr. Chowdhury

Process Engineer

Intel Corporation

WhatsApp: 0179825**

Available Time:Friday(7pm-10pm)

Engr. Mr. Hossain

Life-time member

Kuet Career Club

WhatsApp: 0149687**

Available Time: Saturday (10am-1pm)

Select an option:

1. Anti-Harassment Response
2. Mental Health Care
3. Academic Consultancy
4. Logout

Enter your choice: 3

Academic Consultancy:

1. Specialized academics assistance
2. Career counseling
3. Academic policy guidance

Enter your choice: 3

Academic policy guidance:

Mr. Zaman

Head of the Guidance

Student Well-fare Centre

Email: zamannn@kuet.ac.bd

Available Time: (10am-1pm) & (3pm-5pm)

Select an option:

1. Anti-Harassment Response
2. Mental Health Care
3. Academic Consultancy
4. Logout

Enter your choice: 4

Logged out.

Welcome to the portal!

1. Register
2. Login
3. Exit

Enter your choice: 3

Thank You

Programmed by

Sumaiya Khan(2203061)

Khadiza Farhin(2203065)

Noshin Farjana(2203066)

Discussion :

This project implemented a student portal system in C, offering functionalities for user registration, login, and access to various student services. It aimed to be a centralized platform for students to access resources related to Anti-Harassment Response, Mental Health Care, Academic Consultancy. It was designed to collect and store information from users securely while allowing them to interact with different committees and services available within a university environment, specially modeled after KUET (Khulna University of Engineering & Technology). The program used a User struct to store user details, such as name, password, department, roll number, and phone number. Passwords were stored in plain text. The registration process ensured data integrity by checking the phone number's validity. The login process matched the provided username and password with the stored values, ensuring that only registered users could access the services. Once logged in, users were presented with options for anti-harassment reporting, mental health care, and academic consultancy. Each user interaction, such as reporting harassment or selecting a mental health service, was recorded in respective text files (Anti_Harassment_Response.txt and Mental_Health_Response.txt). This ensured that the data was saved for future reference and could be reviewed by relevant authorities .

Conclusion:

This program demonstrated a functional system for providing important services to university students, with a focus on harassment reporting, mental health support, and academic advice. It integrated user input, file storage, and service selection in a straightforward and interactive manner. Some areas of improvement included enhancing the input validation process to make it more user-friendly and adding more robust security measures for handling sensitive data like passwords. Overall, the program fulfilled its primary objectives and provided a helpful tool for student welfare and support services.

Conclusion :

This program demonstrated a functional system for providing important services to university students, with a focus on harassment reporting, mental health support, and academic advice. It integrated user input, file storage, and service selection in a straightforward and interactive manner. Some areas of improvement included enhancing the input validation process to make it more user-friendly and adding more robust security measures for handling sensitive data like passwords. Overall, the program fulfilled its primary objectives and provided a helpful tool for student welfare and support services.