INSTITUTE OF ENGINEERING AND MANAGEMENT(IEM)
DEPARTMENT OF BASIC SCIENCE AND HUMANITIES(BSH)

Name of the Students: Amar Pal
Enrolment Number: 12022002003202
Section: H
Class Roll Number: 65
Stream: ECE
Subject: Programming for Problem Solving
Subject Code: ESC103
Department: Basic Science and Humanities

Under the supervision of
PROF SWARNENDU GHOSH

Academic Year: 2022-26

PROJECT REPORT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE FIRST SEMESTER

DEPARTMENT OF BASIC SCIENCE AND HUMANITITES
INSTITUTE OF ENGINEERING AND MANAGEMENT, KOLKATA

CERTIFICATE OF RECOMMENDATION

We hereby recommend that the project prepared under our supervision by AMAR PAL ,entitled " MAKING OF A ATM MACHINE USING C " be accepted in partial fulfillment of the requirements for the degree of partial fulfillment of the first semester.

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Head of the Department
Basic Sciences and Humanities
IEM, Kolkata

Project Supervisor

●Introduction :

In C programming, a ATM machine can be made using the switch case statement which is a control structure that allows to execute different blocks of code based on the value of a variable or an expression. It provides a convenient way to write multiple conditional branches in a more concise and organized manner.

●2. STEPS AND IMPLEMENTATION :

Step 1: Setting up the Project

1. Create a new C project in your preferred Integrated Development Environment (IDE) or text editor.
2. Set up the necessary libraries, such as `stdio.h`for input/output operations.

Step 2: Define Functions and Variables

1. Define functions for various operations, such as withdrawing money, depositing money, checking balance, etc.
2. Declare variables to store user information like account number, PIN, balance, etc.

Step 3: Build the User Interface

1. Create a login screen where users can enter their account number and PIN.
2. Validate the account number and PIN against a predefined set of values or a database.
3. If the credentials are correct, provide a menu for different ATM operations.

Step 4: Implement ATM Operations

1. Withdraw Money:
   - Ask the user to enter the amount to withdraw.
   - Validate if the requested amount is within the account balance.
   - Deduct the withdrawn amount from the account balance.
2. Deposit Money:
   - Ask the user to enter the amount to deposit.
   - Add the deposited amount to the account balance.
3. Check Balance:
   - Display the current account balance.
4. Exit:
   - Provide an option for the user to exit the ATM program.

Step 5: Handle Errors and Edge Cases

1. Implement error handling mechanisms for cases like entering an invalid account number, incorrect PIN, insufficient balance, etc.
2. Consider handling cases where the user enters non-numeric values or enters negative amounts for transactions.

Step 6: Test and Debug

1. Run the program and test it with different scenarios.
2. Identify and fix any bugs or logical errors that may occur during testing.

Programs

```
#include <stdio.h>

int main() {
int pin = 1234;
int user_pin;
float balance = 5000.0;
int option;
float amount;

printf("Welcome to the ATM machine\n");
printf("Enter your PIN: ");
scanf("%d", &user_pin);
```

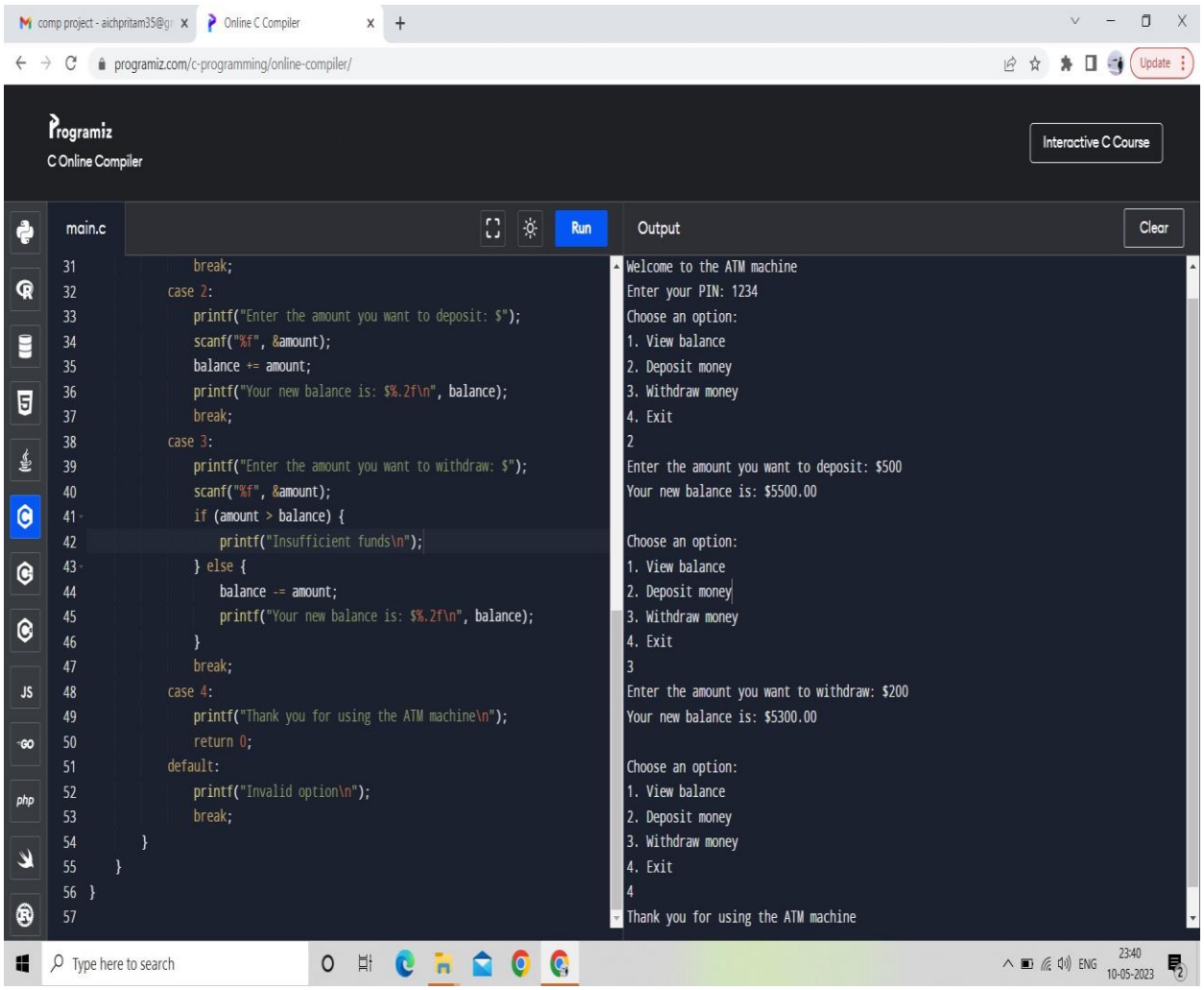
- if (user_pin != pin) {
  - printf("Invalid PIN\n");
  - return 0;
- }

- while (1) {
  - printf("\nChoose an option:\n");
  - printf("1. View balance\n");
  - printf("2. Deposit money\n");
  - printf("3. Withdraw money\n");
  - printf("4. Exit\n");
  - scanf("%d", &option);

  - switch (option) {
  - case 1:
- printf("Your account balance is:
  $%.2f\n", balance);
- break; ▪ case 2:
- printf("Enter the amount you want to deposit: $");
- scanf("%f", &amount);
- balance += amount;
- printf("Your new balance is: $%.2f\n", balance);
- break; ▪ case 3:
- printf("Enter the amount you want to withdraw: $");
- scanf("%f", &amount);
- if (amount > balance) { oprintf("Insufficient funds\n");
- } else {
  - o balance -= amount; o
  - printf("Your new balance is:
    $%.2f\n", balance);
- }
- break; ▪ case 4:
- printf("Thank you for using the ATM machine\n");
- return 0; ▪ default:
- printf("Invalid option\n");
- break;

- } }
- }
-

•Outputs


comp project - aichpritam35@g
Online C Compiler
programiz.com/c-programming/online-compiler/
Update
Programiz
C Online Compiler
Interactive C Course
main.c
Run
Output
Clear
31 break;
32 case 2:
33 printf("Enter the amount you want to deposit: $");
34 scanf("%f", &amount);
35 balance += amount;
36 printf("Your new balance is: $%.2f\n", balance);
37 break;
38 case 3:
39 printf("Enter the amount you want to withdraw: $");
40 scanf("%f", &amount);
41 if (amount > balance) {
42 printf("Insufficient funds\n");
43 } else {
44 balance -= amount;
45 printf("Your new balance is: $%.2f\n", balance);
46 }
47 break;
48 case 4:
49 printf("Thank you for using the ATM machine\n");
50 return 0;
51 default:
52 printf("Invalid option\n");
53 break;
54 }
55 }
56 }
57
Welcome to the ATM machine
Enter your PIN: 1234
Choose an option:
1. View balance
2. Deposit money
3. Withdraw money
4. Exit
2
Enter the amount you want to deposit: $500
Your new balance is: $5500.00
Choose an option:
1. View balance
2. Deposit money
3. Withdraw money
4. Exit
3
Enter the amount you want to withdraw: $200
Your new balance is: $5300.00
Choose an option:
1. View balance
2. Deposit money
3. Withdraw money
4. Exit
4
Thank you for using the ATM machine
Type here to search
ENG
23:40
10-05-2023

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