Assignment 2

// Q1. Find the price of item when discount is given (specify different discount based on price)

```c
#include <stdio.h>

void main () {

    int price, discount, calculateDiscount, finalPrice;
    printf("Enter the price: ");
    scanf("%d", &price);

    if (price <=1000){
        discount = 5;
    } else if (price>1000 && price <=5000)
    {
        discount = 10;
    } else {
        discount = 20;
    }

    calculateDiscount = (price * discount)/100;

    printf("Total discount is: %d\n", calculateDiscount);

    finalPrice = price - calculateDiscount;
    printf("Your dicount Price is: %d", finalPrice);
}
```

// Q2. Write a program to find greatest of three numbers using nested if-else.

```c
#include <stdio.h>

void main()
{
    int n1, n2, n3;

    printf("Enter n1: ");
    scanf("%d", &n1);
    printf("Enter n2: ");
    scanf("%d", &n2);
    printf("Enter n3: ");
    scanf("%d", &n3);

    if (n1 >= n2)
    {
        if (n1 >= n3)
        {
            printf("Greatest number: %d\n", n1);
        }
        else
        {
            printf("Greatest number: %d\n", n3);
        }
    }
    else
    {
```

```c
        if (n2 >= n3)

        {

            printf("Greatest number: %d\n", n2);

        }

        else

        {

            printf("Greatest number: %d\n", n3);

        }

    }


    if (n1 == n2 && n2 == n3)

    {

        printf("All numbers are equal.\n");

    }

}
```

//Q3. Accept two numbers from user and an operator (+,-,/,*,%) based on that perform the desiredoperations.

```c
#include <stdio.h>

void main() {
    int no1, no2, result;
    printf("Enter the no1: ");
    scanf("%d", &no1);

    printf("Enter the no2: ");
    scanf("%d", &no2);

    char operator;

    printf("Enter an operatorerator to perform an operatoreration: ");
    scanf(" %c", &operator);

    if (operator == '+')
    {
        result = no1 + no2;
    } else if (operator == '-')
    {
        result = no1 - no2;
    } else if (operator == '*')
    {
        result = no1 * no2;
    } else if (operator == '/')
```

```c
    {
        if (no2 != 0) {
            result = no1 / no2;
        } else {
            printf("Error! Division by zero.\n");
            return 1;
        }
    } else if (operator == '%') {
        if ((int)no1 == no1 && (int)no2 == no2) {
            result = (int)no2 % (int)no2;
        } else {
            printf("Error! Modulus operatoreration requires integer values.\n");
            return 1;
        }
    }
    else {
        printf("Invalid");
    }

        printf("Result: %d\n", result);

}
```

//Q4. Display a menu to the user (like 1.Even Odd 2. Basic salary etc), ask the user to enter his choice,then based on that perform the desired operations.

```c
#include <stdio.h>

int main() {
    int choice;
    printf("Menu \n1) Even Odd \n2) Basic Salary\n");

    printf("Enter the number to perform the operation: ");
    scanf("%d", &choice);

    if (choice == 1) {
        int no;
        printf("Even Odd\n");
        printf("Enter a number: ");
        scanf("%d", &no);

        if (no % 2 == 0) {
            printf("%d is Even\n", no);
        } else {
            printf("%d is Odd\n", no);
        }
    } else if (choice == 2) {
        double basic, hra, da, grossSalary;
        printf("Basic Salary\n");
        printf("Enter basic salary: ");
        scanf("%lf", &basic);
```

```c
        hra = 0.2 * basic; // HRA = 20% of basic salary

        da = 0.5 * basic;  // DA = 50% of basic salary

        grossSalary = basic + hra + da;


        printf("Gross Salary = %.2f\n", grossSalary);
    } else {

        printf("Invalid Input\n");

    }


    return 0;
}
```

// Q5. Accept the price from user. Ask the user if he is a student (user may say yes or no). If he is a student and he has purchased more than 500 than discount is 20% otherwise discount is 10%.But if he is not a student then if he has purchased more than 600 discount is 15% otherwise there is not discount.

```c
#include <stdio.h>

int main() {
    int price, yesno;
    double discount = 0.0;

    printf("Enter user price: ");
    scanf("%d", &price);

    printf("You are a student or not \n1) Yes \n2) No\n");
    scanf("%d", &yesno);

    if (yesno == 1) {
        printf("You are a Student\n");
        if (price > 500) {
            discount = 0.2 * price;
            printf("20%% discount applied.\n");
        } else {
            discount = 0.1 * price;
            printf("10%% discount applied.\n");
        }
    } else if (yesno == 2) {
        printf("You are not a student\n");
        if (price > 600) {
```

```c
        discount = 0.15 * price;

        printf("15%% discount applied.\n");

    } else {

        printf("No discount applied.\n");

    }

    } else {

        printf("Invalid Input\n");

        return 1;

    }


    double finalPrice = price - discount;

    printf("Final price after discount: %.2f\n", finalPrice);


    return 0;

}
```