Assignment 2

Nested if-else

==

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

```c
#include <stdio.h>
//Find the price of item when discount is given
//(specify different discount based on price)

void main(){
        float mrp_price, net_pay, selling_price, discount;

        printf("Enter MRP price of item = ");
        scanf("%f",&mrp_price);

        printf("Enter percentage of discount = ");
        scanf("%f",&discount);

        selling_price= mrp_price*discount/100;
        printf("Selling price is %.2f",selling_price);

        net_pay= mrp_price - selling_price;

        printf("\nNet pay price is %.2f Rs",net_pay);

        if (discount>=50 && discount<=60) {
                printf("\nYou got max %.2f %% discount and pay just %.2f Rs", discount,net_pay);
        }
        else {
                if(discount>=20 && discount<=49) {
                        printf("\nYou got min %.2f %% discount and pay just %.2f Rs",
discount,net_pay);
                }
                else {
                        printf("\nUff you are not eligible for discount");
                }
        }
}
```

```c
1  #include <stdio.h>
2  //Find the price of item when discount is given
3  //(specify different discount based on price)
4
5  void main(){
6      float mrp_price, net_pay, selling_price, discount;
7
8      printf("Enter MRP price of item = ");
9      scanf("%f",&mrp_price);
10
11     printf("Enter percentage of discount = ");
12     scanf("%f",&discount);
```

C:\JAVA FULL STACK 25-Oct-2   +   v

```
Enter MRP price of item = 600
Enter percentage of discount = 50
Selling price is 300.00
Net pay price is 300.00 Rs
You got max 50.00 % discount and pay just 300.00 Rs
---------------------------------
Process exited after 2.743 seconds with return value 52
Press any key to continue . . .
```

ces Compile Log Debug Find Results Close

```
- C Compiler: C:\Program Files (x86)\Dev-Cpp\MinGW64\bin\gcc.
- Command: gcc.exe "C:\JAVA FULL STACK 25-Oct-2023\First_Bit\

Compilation results...
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- Errors: 0
- Warnings: 0
- Output Filename: C:\JAVA FULL STACK 25-Oct-2023\First_Bit\C
- Output Size: 128.6015625 KiB
- Compilation Time: 0.22s
```
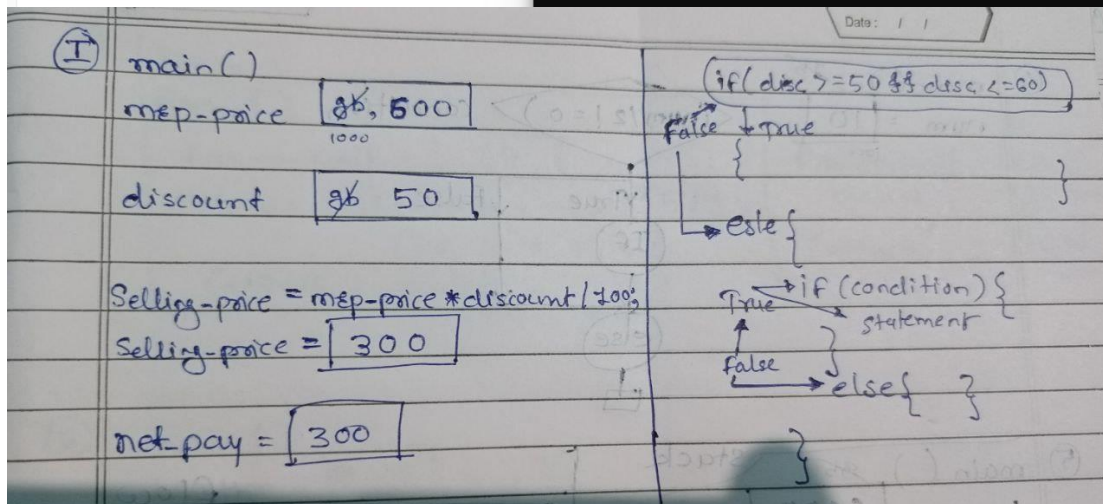

==

2. 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 number n1 =");
scanf("%d",&n1);

printf("Enter number n2 =");
scanf("%d",&n2);
```

```
printf("Enter number n3 =");
scanf("%d",&n3);

if (n1>n2){
        if(n1>n3){
        printf("n1 is greater");
        }
        else {
        printf("n3 is greater");
        }
}
 else {
        if (n2>n3){
                printf("n2 is greater");
        }
        else {
                printf("n3 is greater");
        }
}
}
```

```
 1  #include <stdio.h>
 2  void main() {
 3  int n1, n2, n3;
 4  printf("Enter number n1 =");
 5  scanf("%d",&n1);
 6
 7  printf("Enter number n2 =");
 8  scanf("%d",&n2);
 9
10  printf("Enter number n3 =");
11  scanf("%d",&n3);
12
13  if (n1>n2){
```
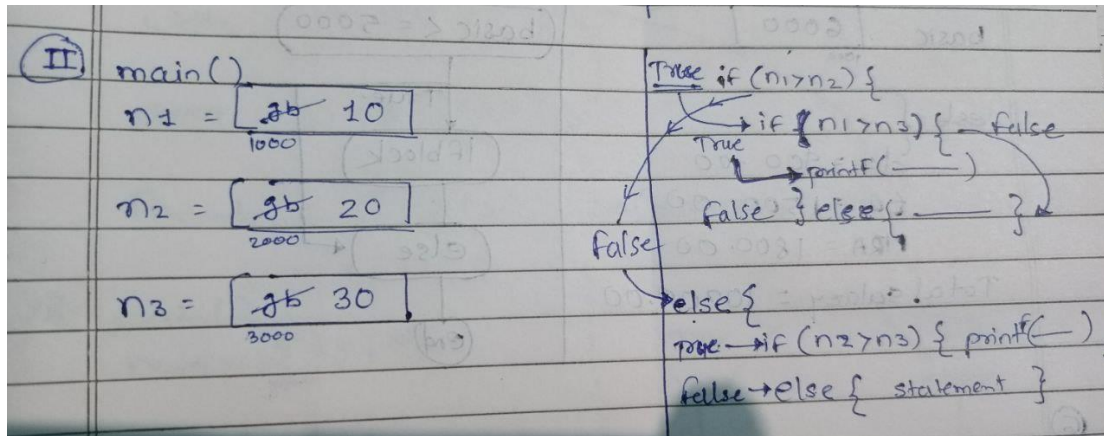
```
 C:\JAVA FULL STACK 25-Oct-2   X    +  v

Enter number n1 =10
Enter number n2 =20
Enter number n3 =30
n3 is greater
--------------------------------
Process exited after 2.575 seconds with return value 13
Press any key to continue . . .
```

```
(II)  main()
      n1 = [ ab 10 ]
           1000

      n2 = [ gb 20 ]
           2000

      n3 = [ gb 30 ]
           3000
```

```
True if (n1>n2) {
         if (n1>n3) {  false
      True
         printf(—)
      false } else {—} 
false
   else {
   True—if (n2>n3) { print(—)
   false—else { statement }
```

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

```c
#include <stdio.h>
int main() {
 char op;
 int result, num1, num2;

 printf("Enter operator = ");
 scanf("%c",&op);

 if(op == '+' || op == '-' || op == '*' || op == '/' || op == '%')
 {

 printf("Enter num1 = ");
 scanf("%d",&num1);

 printf("Enter num2 = ");
 scanf("%d",&num2);

  if (op == '+')
  {
    result = num1 + num2;
    printf("ans is : %d", result);
  }
  else if (op == '-')
  {
    result = num1 - num2;
    printf("ans is : %d", result);
  }
  else if (op == '*')
```

```c
    {
        result = num1 * num2;
        printf("ans is : %d", result);
    }
    else if (op == '/')
    {
        result = num1 / num2;
        printf("ans is : %d", result);
    }
    else if (op == '%')
    {
        result = num1 % num2;
        printf("ans is : %d", result);
    }
}
else
{
    printf("\nInvalid operator entered");
}
return 0;
}
```

```c
 1  #include <stdio.h>
 2  void main() {
 3  int n1, n2, n3;
 4  printf("Enter number n1 =");
 5  scanf("%d",&n1);
 6
 7  printf("Enter number n2 =");
 8  scanf("%d",&n2);
 9
10  printf("Enter number n3 =");
11  scanf("%d",&n3);
12
13  if (n1>n2){
```

```
C:\JAVA FULL STACK 25-Oct-2   X    +   v

Enter number n1 =10
Enter number n2 =20
Enter number n3 =30
n3 is greater
---------------------------------
Process exited after 2.575 seconds with return value 13
Press any key to continue . . .
```

(III)

```
op = [ 9b  +, -, *, 6, %. ]
         500
num1 = [ 9b  10 ]
         1000
num2 = [ 9b  20 ]
         2000
if true →
  resut for  +  = [ 30 ]  9b
            -  = [ -10 ]  9b
            *  = [ 200 ]  9b
            %  = [ 10 ]   9b
            /  = [ 0 ]    9b
```

else { ← false if operator is not valid

Not valid operator }

==
4. 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 num, res, program, salary;
 printf("Enter the number : ");
 scanf("%d", &num);
 printf("\nPress 1 for Even Odd");
 printf("\nPress 2. Basic Salary");
 printf("\nEnter 1 or 2 from the above menu : \n");
 scanf("%d", &program);

 if (program == 1)
 {
  if (num % 2 == 0)
  {
    printf("number is even");
  }
  else
  {
    printf("number is odd");
  }
 }
 else
 {
```

```
   if (program == 2 && num>0)
   {
     salary = num * 30;
     printf("your salary is equal to : %d\n", salary);
   }
   else
   {
     printf("salary is invalid");
   }
 }
   return 0;
}
```

```c
1   #include<stdio.h>
2   int main()
3 ▪ {
4       int num, res, program, salary;
5       printf("Enter the number : ");
6       scanf("%d", &num);
7       printf("\nPress 1 for Even Odd");
8       printf("\nPress 2. Basic Salary");
9       printf("\nEnter 1 or 2 from the above menu : \n");
10      scanf("%d", &program);
11
12      if (program == 1)
13 ▪    {
```
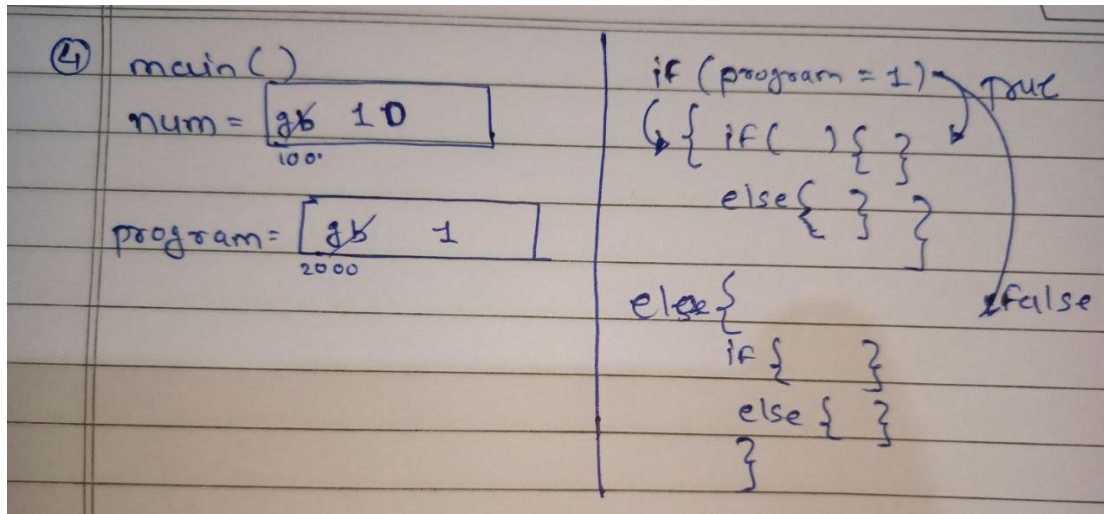
```
C:\JAVA FULL STACK 25-Oct-2    X    +   ∨

Enter the number : 10

Press 1 for Even Odd
Press 2. Basic Salary
Enter 1 or 2 from the above menu :
1
number is even
----------------------------------
Process exited after 3.447 seconds with return value 0
Press any key to continue . . .
```

④ main ()

```
num = ↗ 1 0
         100
```

```
program = ↗ 1
            2000
```

if (program = 1) ⟶ True

⤷ { if ( ) { ? }
     else { ? } ? }

else {
  if { ? }
  else { ? }
  ?
}

false

===

5. 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.

#include <stdio.h>

int main() {
  float discount, price;
  int quantity;
  char Student;

  // Accept the price and quantity from the user
  printf("Enter the price of item : ");
  scanf("%f", &price);

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

  // Ask if the user is a student
  printf("Are you a student? (y/n): ");
  scanf(" %c", &Student);

  // Calculate discount based on user type and purchase amount
  if (Student == 'y') {
    if (quantity > 500) {
      // discount = 20;

```c
        printf("You got 20%% discount");
      } else {
         // discount = 10;
         printf("You got 10%% discount");
      }
   } else {
      if (quantity > 600) {
         // discount = 15;
         printf("You got 15%% discount");
      } else {
         // discount = 00;
          printf("BAD LUCK..! No discount");
      }
   }
   return 0;
}
```

```c
1  #include <stdio.h>
2  int main() {
3       float  discount, price;
4       int quantity;
5       char Student;
6
7       // Accept the price and quantity from the user
8       printf("Enter the price of item : ");
9       scanf("%f", &price);
10
11      printf("Enter the quantity: ");
12      scanf("%d", &quantity);
13
```

Compile Log   Debug   Find Results   Close

- C Compiler: C:\Program Files (x86)\Dev-Cpp\Mi
- Command: gcc.exe "C:\JAVA FULL STACK 25-Oct-2

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: C:\JAVA FULL STACK 25-Oct-20
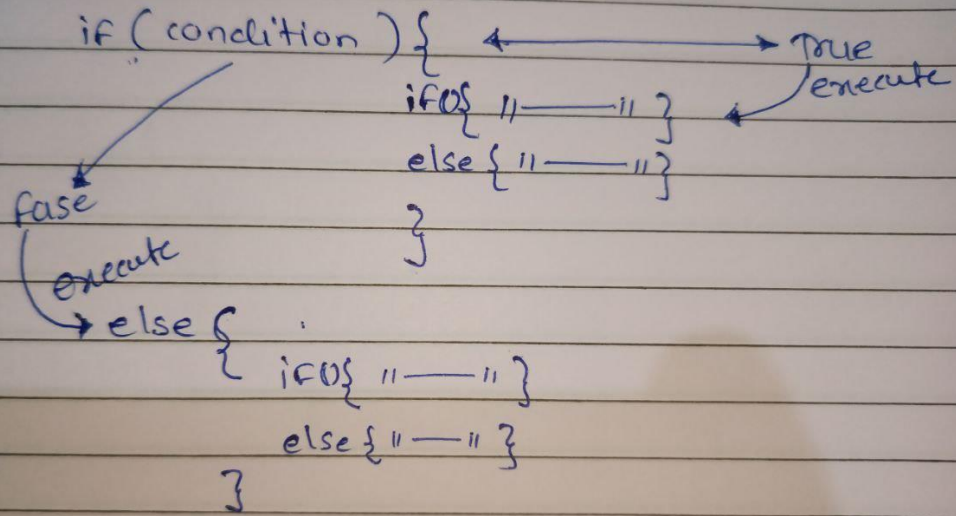- Output Size: 128.6015625 KiB
- Compilation Time: 0.20s

C:\JAVA FULL STACK 25-Oct-2   ×   +   ∨

```
Enter the price of item : 600
Enter the quantity: 500
Are you a student? (y/n): y
You got 10% discount
----------------------------------
Process exited after 11.29 seconds with return value 0
Press any key to continue . . .
```

⑤

if (condition) {   ⟷ True
                                            execute
        if() { "————" }
        else { "————"}

fase
        execute
    → else {
            if() { "————" }
            else { "————" }
        }