

PF LAB 4 (DECISION STRUCTURES)

ASSIGNMENT

MASHHOOD RIAZ

24K-0530

SECTION 1D

Q1)

te modified	Type	Size
/09 *q1 - Notepad		
File Edit Format View Help		
#include<stdio.h>		
int main()		
{		
int num;		
printf("Enter the number:");		
scanf("%d",&num);		
switch(num%3==0)		
{		
case 1:		
printf("The number is multiple of 3");		
break;		
default:		
printf("The number is not multiple of 3");		
}		
return 0;		
}		

24k-0530

File C:\Windows\System32\cmd.exe

Microsoft Windows [Version 10.0.19045.4780]
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C:\Users\Fast\Documents\24k-0530>gcc q1.c -o q1.exe

C:\Users\Fast\Documents\24k-0530>q1.exe

Enter the number:6

The number is multiple of 3

C:\Users\Fast\Documents\24k-0530>q1.exe

Enter the number:7

The number is not multiple of 3

C:\Users\Fast\Documents\24k-0530>_

Q2)

```
q2 - Notepad
File Edit Format View Help
#include<stdio.h>
int main()
{
    int num1,num2,Ans;
    char op;
    printf("Enter first number:");
    scanf("%d",&num1);
    printf("Enter the operator(+ or - or * or /):");
    scanf(" %c",&op);
    printf("Enter the second number:");
    scanf("%d",&num2);
    switch(op)
    {
        case '+' :
            Ans=num1+num2;
            printf("The sum result is %d",Ans);
            break;
        case '-' :
            Ans=num1-num2;
            printf("The subtraction result is %d",Ans);
            break;
        case '*' :
            Ans=num1*num2;
            printf("The multiplication result is %d",Ans);
            break;
        case '/' :
            Ans=num1/num2;
            printf("The division result is %d",Ans);
            break;
        default:
            printf("Invalid input");
            break;
    }
    return 0;
}
```


C:\Windows\System32\cmd.exe

Microsoft Windows [Version 10.0.19045.4780]
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C:\Users\Fast\Documents\24k-0530>gcc q2.c -o q2.exe

C:\Users\Fast\Documents\24k-0530>q2.exe

Enter first number:1

Enter the operator(+ or - or * or /):+

Enter the second number:2

The sum result is 3

C:\Users\Fast\Documents\24k-0530>q2.exe

Enter first number:2

Enter the operator(+ or - or * or /):-

Enter the second number:1

The subtraction result is 1

C:\Users\Fast\Documents\24k-0530>q2.exe

Enter first number:4

Enter the operator(+ or - or * or /):*

Enter the second number:5

The multiplication result is 20

C:\Users\Fast\Documents\24k-0530>q2.exe

Enter first number:20

Enter the operator(+ or - or * or /):/

Enter the second number:5

The division result is 4

C:\Users\Fast\Documents\24k-0530>

Q3)

```
q3 - Notepad
File Edit Format View Help
#include<stdio.h>
int main()
{
    char c;
    printf("Enter a character:");
    scanf(" %c",&c);
    if (c>='0'&&c<='9')
    {
        printf("The character is a digit");
    }
    else if (c>='a'&&c<='z')
    {
        printf("The character is a small alphabet");
    }
    else if (c>='A'&&c<='Z')
    {
        printf("The character is a capital alphabet");
    }
    else
    {
        printf("The character is a special character");
    }
    return 0;
}
```

```
C:\ Select C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.19045.4780]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Fast\Documents\24k-0530>gcc q3.c -o q3.exe

C:\Users\Fast\Documents\24k-0530>q3.exe
Enter a character:a
The character is a small alphabet
C:\Users\Fast\Documents\24k-0530>q3.exe
Enter a character:A
The character is a capital alphabet
C:\Users\Fast\Documents\24k-0530>Q3.EXE
Enter a character:3
The character is a digit
C:\Users\Fast\Documents\24k-0530>Q3.EXE
Enter a character:@
The character is a special character
C:\Users\Fast\Documents\24k-0530>
```

Q4)

File Edit View

```
#include<stdio.h>
int main()
{
    float price,discount,a_ammount,s_ammount,aa_discount;
    int quantity;
    printf("Enter the price of items bought:");
    scanf("%f",&price);
    printf("Enter the quantity of items bought:");
    scanf("%d",&quantity);
    a_ammount=price*quantity;
    if (a_ammount<500&&a_ammount>0)
    {
        printf("The minimum ammount eligible for discount is 500\n");
        discount=0;
    }
    else if (a_ammount>=500&&a_ammount<2000)
    {
        discount=0.05;
    }
    else if (a_ammount>=2000&&a_ammount<4000)
    {
        discount=0.1;
    }
    else if (a_ammount>=4000&&a_ammount<=6000)
    {
        discount=0.2;
    }
    else if (a_ammount>6000)
    {
        discount=0.35;
    }
    else
    {
        printf("INVALID INPUT");
    }

    s_ammount=discount*a_ammount;
    aa_discount=a_ammount-s_ammount;
    printf("Your actual ammount for this shopping is Rs. %.2f\n",a_ammount);
    printf("The ammount saved due to eid discount is Rs. %.2f\n",s_ammount);
    printf("The ammount after discount is Rs. %.2f\n",aa_discount);

    return 0;
}
```

```
C:\Windows\System32\cmd.e  X  +  v

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C:\Users\Hp\Documents\24k-0530>gcc q4.c -o q4.exe

C:\Users\Hp\Documents\24k-0530>q4.exe
Enter the price of items bought:100
Enter the quantity of items bought:2
The minimum ammount eligible for discount is 500
Your actual ammount for this shopping is Rs. 200.00
The ammount saved due to eid discount is Rs. 0.00
The ammount after discount is Rs. 200.00

C:\Users\Hp\Documents\24k-0530>q4.exe
Enter the price of items bought:100
Enter the quantity of items bought:6
Your actual ammount for this shopping is Rs. 600.00
The ammount saved due to eid discount is Rs. 30.00
The ammount after discount is Rs. 570.00

C:\Users\Hp\Documents\24k-0530>q4.exe
Enter the price of items bought:100
Enter the quantity of items bought:15
Your actual ammount for this shopping is Rs. 1500.00
The ammount saved due to eid discount is Rs. 75.00
The ammount after discount is Rs. 1425.00

C:\Users\Hp\Documents\24k-0530>q4.exe
Enter the price of items bought:100
Enter the quantity of items bought:25
Your actual ammount for this shopping is Rs. 2500.00
The ammount saved due to eid discount is Rs. 250.00
The ammount after discount is Rs. 2250.00

C:\Users\Hp\Documents\24k-0530>q4.exe
Enter the price of items bought:100
Enter the quantity of items bought:50
Your actual ammount for this shopping is Rs. 5000.00
The ammount saved due to eid discount is Rs. 1000.00
The ammount after discount is Rs. 4000.00

C:\Users\Hp\Documents\24k-0530>q4.exe
Enter the price of items bought:150
Enter the quantity of items bought:62
Your actual ammount for this shopping is Rs. 9300.00
The ammount saved due to eid discount is Rs. 3255.00
The ammount after discount is Rs. 6045.00
```


Q5)

lab4q5 - Notepad

File Edit Format View Help

```
#include<stdio.h>
int main(){
    int customerid,unit;
    float total,surcharge;
    char name[5];
    printf("Enter customer id: ");
    scanf("%d",&customerid);
    printf("Eneter your name: ");
    scanf("%s",&name);
    printf("Enter Unit consumed: ");
    scanf("%d",&unit);
    printf("\ncustomer ID: %d",customerid);
    printf("\nName:%s",name);
    printf("\nUnits Consumed: %d\n",unit);

    if (unit>0 & unit<= 199){
        total = unit*16.2;
        printf("Amount Charges @Rs.16.20 per unit: %.2f",total);
    }
    else if (unit>=200 & unit<300){
        total = unit*20.10;
        printf("Amount Charges @Rs.20.10 per unit: %.2f",total);
    }
    else if (unit>=300 & unit<500){
        total = unit*27.10;
        printf("Amount Charges @Rs.27.10 per unit: %.2f",total);
    }
    else {
        total = unit*35.90;
        printf("Amount Charges @Rs.35.90 per unit: %.2f",total);
    }
    if (total>18000){
        surcharge = total*0.15;
    }
    printf("\nSurcharge Amount: %.2f",surcharge);
    total = total + surcharge;
    printf("\nNet Amount Paid by the Customer: %.2f",total);
}
```

C:\Windows\System32\cmd.exe

Microsoft Windows [Version 10.0.19044.3324]

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C:\Users\student24\Documents\24k-0530>gcc lab4q5.c -o lab4q5.exe

C:\Users\student24\Documents\24k-0530>lab4q5.exe

Enter customer id: 1001

Eneter your name: James

Enter Unit consumed: 800

customer ID: 1001

Name:James ♥

Units Consumed: 800

Amount Charges @Rs.35.90 per unit: 28720.00

Surcharge Amount: 4308.00

Net Amount Paid by the Customer: 33028.00

C:\Users\student24\Documents\24k-0530>

Q6)

```
q6 - Notepad
File Edit Format View Help
#include <stdio.h>

int main() {
    int n;

    printf("Enter a positive integer: ");
    scanf("%d", &n);

    if (n >= 1 && n <= 9) {
        switch (n) {
            case 1:
                printf("one\n");
                break;
            case 2:
                printf("two\n");
                break;
            case 3:
                printf("three\n");
                break;
            case 4:
                printf("four\n");
                break;
            case 5:
                printf("five\n");
                break;
            case 6:
                printf("six\n");
                break;
            case 7:
                printf("seven\n");
                break;
            case 8:
                printf("eight\n");
                break;
            case 9:
                printf("nine\n");
                break;
        }
    } else {
        printf("greater than 9\n");
    }

    return 0;
}
```

C:\Windows\System32\cmd.exe

```
Microsoft Windows [Version 10.0.19044.3324]
(c) Microsoft Corporation. All rights reserved.
```

```
C:\Users\student24\Documents\24k-0530>gcc q6.c -o q6.exe
```

```
C:\Users\student24\Documents\24k-0530>q6.exe
```

```
Enter a positive integer: 1
```

```
one
```

```
C:\Users\student24\Documents\24k-0530>q6.exe
```

```
Enter a positive integer: 2
```

```
two
```

```
C:\Users\student24\Documents\24k-0530>q6.exe
```

```
Enter a positive integer: 11
```

```
greater than 9
```

```
C:\Users\student24\Documents\24k-0530>
```