

Name: **Muhammad Anas**

Roll No: **23P-0613**

Section: : **CS-1B**

Assignment # 01

Code:

/*program calculates and prints the bill for a cellular telephone company. The company offers 2 types of services regular and premium.

- Regular service: \$10.00 plus first 50 minutes are free. Charges for over 50 minutes are \$0.20 per minute.
- Premium service: \$25.00 plus:
 - a. For calls made from 6:00 a.m. to 6:00 p.m., the first 75 minutes are free; charges for more than 75 minutes are \$0.10 per minute.
 - b. For calls made from 6:00 p.m. to 6:00 a.m., the first 100 minutes are free; charges for more than 100 minutes are \$0.05 per minute.

A service code of r or R means regular service, a service code of p or P means premium service.

For the premium service, the customer may be using the service during the day and the night.

*/

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

```
float calculatebills_regular( int number_of_minutes);//Function for Regular Service declaration.
```

```
float calculatebills_premium_day_time( int day_minutes );//Function for Premium Service for day  
//declaration.
```

```
float calculatebills_premium_night_time( int night_minutes );//Function for Premium Service for  
//night declaration.
```

```
int main()
```

```
{
```

```
int account_number,number_of_minutes,day_minutes, night_minutes;
```

```
char service_code ;
```

```
printf("Enter Account Number of User:");//Prompt user to enter it's account number.
scanf("%d",&account_number);
printf("Enter Service Code (R for regular and P for premium):");//Enter service code either R or r
//for regular and P or p for premium.
scanf(" %c",&service_code);
```

```
float calculatebills_regular(int number_of_minutes);// Function Calling.
float calculatebills_premium_day_time( int day_minutes );// Function Calling.
float calculatebills_premium_night_time( int night_minutes );// Function Calling.
float total();
```

```
switch (service_code )
{
    case 'r':
    case 'R':
    {
        printf("Enter number of minutes :");//Number of minutes for regular service
        scanf("%d",&number_of_minutes);
        printf("\n");
        printf("\t***Regular***\n"); //Print the output displayed to user.
        printf("Account Number of User is =%d\n",account_number);
        printf("Service Code : %c\n",service_code);
        printf("Number of Minutes Used =%d\n",number_of_minutes );
        printf("Regular Bill is =$%f\n",calculatebills_regular(number_of_minutes ));
        break;
    }

    case 'p':
    case 'P':
    {

        printf("Enter number of day minutes:");
        scanf("%d",&day_minutes);
        printf("Enter number of night minutes:");
        scanf("%d",&night_minutes);
```

```

printf("\t***Premium***\n"); //Print the output displayed to user.
printf("Account Number of User is =%d\n",account_number);
printf("Service Code :%c\n",service_code);
printf("Number of Day Minutes Used =%d\n",day_minutes);
printf("Number of Night Minutes Used =%d\n",night_minutes);
printf("Premium Bill Day time is = $%f\n",calculatebills_premium_day_time(day_minutes ));
printf("Premium Bill Night time is = $%f\n",calculatebills_premium_night_time(night_minutes ));

```

```

break;
}

```

```

default: // If user enter any other character than r or p then it's show error or Invalid Input.
{
    printf("Invalid Input Casting Error");
    return 1;
}
}
return 0;
}

```

```

// function definition for regular service
float calculatebills_regular( int number_of_minutes )
{

//condition for minutes equal or less than 50min.
if (number_of_minutes <= 50) {
    return 10.0; // return the value equal to 10.
}
else// or the above condition not fullfill then this condition.
{
    float bills1;
    bills1 = 10.0 + (number_of_minutes - 50) * 0.20;
    return bills1; //sum of bill
}
}

```

```
}
```

```
}
```

```
// function definition for premium day service
```

```
float calculatebills_premium_day_time( int day_minutes )
```

```
{
```

```
    float day_time_cost =0;
```

```
    float bill=25.00;
```

```
    if (day_minutes >75)
```

```
    {
```

```
        day_time_cost = bill+ (day_minutes -75) *0.10;
```

```
    }
```

```
    else
```

```
    {
```

```
        day_time_cost = bill;
```

```
    }
```

```
    return day_time_cost;
```

```
}
```

```
// function definition for premium night service
```

```
float calculatebills_premium_night_time( int night_minutes )
```

```
{
```

```
    float night_time_cost =0;
```

```
    float bill=25.00;
```

```
    if (night_minutes >100)
```

```
    {
```

```
        night_time_cost = bill+ (night_minutes -100) *0.05;
```

```
    }
```

```
    else
```

```
    {
```

```
        night_time_cost = bill;
```

```
    }
```

```
    return night_time_cost; }
```

Output:

```
Enter Account Number of User:123
Enter Service Code (R for regular and P for premium):r
Enter number of minutes :30

***Regular***
Account Number of User is =123
Service Code : r
Number of Minutes Used =30
Regular Bill is =$10.000000
muhammad@muhammad-Latitude-5490:~/Desktop$ ./a.out
Enter Account Number of User:987
Enter Service Code (R for regular and P for premium):r
Enter number of minutes :80

***Regular***
Account Number of User is =987
Service Code : r
Number of Minutes Used =80
Regular Bill is =$16.000000
muhammad@muhammad-Latitude-5490:~/Desktop$ ./a.out
Enter Account Number of User:5643
Enter Service Code (R for regular and P for premium):p
Enter number of day minutes:20
Enter number of night minutes:70

***Premium***
Account Number of User is =5643
Service Code :p
Number of Day Minutes Used =20
Number of Night Minutes Used =70
Premium Bill Day time is = $25.000000
Premium Bill Night time is = $25.000000
muhammad@muhammad-Latitude-5490:~/Desktop$ ./a.out
Enter Account Number of User:9865
Enter Service Code (R for regular and P for premium):p
Enter number of day minutes:80
Enter number of night minutes:110

***Premium***
Account Number of User is =9865
Service Code :p
Number of Day Minutes Used =80
Number of Night Minutes Used =110
Premium Bill Day time is = $25.500000
Premium Bill Night time is = $25.500000
muhammad@muhammad-Latitude-5490:~/Desktop$ ./a.out
Enter Account Number of User:9876
Enter Service Code (R for regular and P for premium):p
Enter number of day minutes:150
Enter number of night minutes:200

***Premium***
Account Number of User is =9876
Service Code :p
Number of Day Minutes Used =150
Number of Night Minutes Used =200
Premium Bill Day time is = $32.500000
Premium Bill Night time is = $30.000000
```