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**Labsheet-3**

**1.**

#include <stdio.h>

#include <stdlib.h>

int main()

{

float unit ,total,sc,dc,extra,y;

sc=20; //Service Charge = sc

dc=30; //Demand charge= dc

extra = sc+dc; // extra means without unit charge

printf("Please enter how much unit did you use: ");

scanf("%f",&unit);

printf("\nYour service charge per month: %.2f taka", sc);

printf("\nYour demand charge per month: %6.2f taka", dc);

printf("\n");

//taka per unit is counted according to Palli bidyut

if ((0<=unit) && (50>=unit))

{

if (0==unit)

{

printf("\nYou have to pay just %.2f taka",extra);

}

else

{

total = (3.75\*unit)+extra;

printf("\nYou have to pay total %.2f taka for this month",total);

}

}

else if ((50<unit)&& (75>=unit))

{

unit-=50;

y = (4.19\*unit)+extra;

total = y+(50\*3.75);

printf("\nYou have to pay total %.2f taka for this month",total);

}

else if ((75<unit)&&(200>= unit))

{

unit-=75;

y = (5.72\*unit)+extra;

total = y+(50\*3.75)+(25\*4.19);

printf("\nYou have to pay total %.2f taka for this month",total);

}

else if ((200<unit) && (300>=unit))

{

unit-=200;

y = (6.00\*unit)+extra;

total = y+(50\*3.75)+(25\*4.19)+(125\*5.72);

printf("\nYou have to pay total %.2f taka for this month",total);

}

else if ((300<unit)&&(400>= unit))

{

unit-=300;

y = (6.34\*unit)+extra;

total = y+(50\*3.75)+(25\*4.19)+(125\*5.72)+(100\*6.00);

printf("\nYou have to pay total %.2f taka for this month",total);

}

else if ((400<unit)&& (600>= unit))

{

unit-=400;

y = (9.94\*unit)+extra;

total = y+(50\*3.75)+(25\*4.19)+(125\*5.72)+(100\*6.00)+(100\*6.34);

printf("\nYou have to pay total %.2f taka for this month",total);

}

else if (600<unit)

{

unit-=600;

y = (11.46\*unit)+extra;

total = y+(50\*3.75)+(25\*4.19)+(125\*5.72)+(100\*6.00)+(100\*6.34)+(200\*9.94);

printf("\nYou have to pay total %.2f taka for this month",total);

}

printf("\n");

return 0;

}

**2.**

#include <stdio.h>

#include <stdlib.h>

#include <math.h>

int main()

{

float a, b,c,in\_root,x1,x2,real,imaginary;

printf("Please enter the coefficients of a , b and c: ");

scanf ("%f %f %f", &a,&b,&c);

in\_root = ((b\*b)- (4\*a\*c));

if (a==0)

{

printf ("Invalid! This is not a quadratic equation.");

}

else if (in\_root > 0)

{

x1 = (-b + sqrt(in\_root))/(2\*a);

x2 = (-b - sqrt(in\_root))/(2\*a);

printf ("The solution of a quadratic equation are X= %f and X' = %f ",x1,x2);

}

else if (in\_root < 0)

{

real = -b/(2\*a);

imaginary = sqrt(-in\_root)/(2\*a);

printf ("The solution of a quadratic equation are X = %f+%fi and X'= %f-%fi", real,imaginary,real,imaginary );

}

return 0;

}

**3.**

#include <stdio.h>

#include <stdlib.h>

int main()

{

int a,b;

printf("Please enter two digit number: ");

scanf ("%1d%1d",&a,&b);

if(a==1)

{

switch (b%10)

{

case 0:

printf("Ten");

break;

case 1:

printf("Eleven");

break;

case 2:

printf("Twelve");

break;

case 3:

printf("Thirteen");

break;

case 4:

printf("Fourtheen");

break;

case 5:

printf("Fifteen");

break;

case 6:

printf("Sixteen");

break;

case 7:

printf("Seventeen");

break;

case 8:

printf("Eighteen");

break;

case 9:

printf("Nineteen");

break;

}

return 0;

}

switch(a%10)

{

case 1:

printf("Ten");

break;

case 2:

printf("Twenty");

break;

case 3:

printf("Thirty");

break;

case 4:

printf("Forty");

break;

case 5:

printf("Fifty");

break;

case 6:

printf("Sixty");

break;

case 7:

printf("Seventy");

break;

case 8:

printf("Eighty");

break;

case 9:

printf("Ninety");

break;

}

switch(b%10)

{

case 0:

break;

case 1:

printf(" One");

break;

case 2:

printf(" Two");

break;

case 3:

printf(" Three");

break;

case 4:

printf(" Four");

break;

case 5:

printf(" Five");

break;

case 6:

printf(" Six");

break;

case 7:

printf(" Seven");

break;

case 8:

printf(" Eight");

break;

case 9:

printf(" Nine");

break;

}

return 0;

}