SOLUTION PROGRAMMING IN ANSI C: (Balagurusamy)

CHAPTER-1

Problem exercise no 1.1&1.2:

Coding of the programme:

```
#include<stdio.h>
#include<conio.h>
void main()
{
printf("----------------------------------------\n");
printf("I  First line :A.Z.M.Shakilur Rahman  I\nI  Second line :12/a ,Ali sonar lane  I\nI  Third line:Bogra,5800            I\n");
printf("----------------------------------------");
getch();
}
```

Output:

Problem exercise no. 1.3:

Coding of the programme:

```
#include<stdio.h>
#include<conio.h>
void main()
{clrscr();
printf("*\n* *\n* * *\n* * * * ");
```

```
getch();
}
```

Output:

```
*
* *
* * *
* * * *
```

Problem exercise no :1.4

Coding of the problem:

```
#include<stdio.h>
#include<conio.h>
void main()
{clrscr();
printf("a>>----------------->b");
getch();
}
```

Output:

```
a>>----------------->b
```

Problem exercise no:1.5

Coding of the problem:

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

```
#define pi 3.14159
void main()
{
float r,A;
clrscr();
printf("\n\tENTER THE RADIUS OF A CIRCLE=");
scanf("%f",&r);
A=pi*r*r;
printf("\n\n\tArea=%f sqr unit",A);
getch();
}
```

Output:

ENTER THE RADIUS OF A CIRCLE=2

Area=12.566360 sqr unit

Problem exercise no:1.6

CODING:

```
#include<stdio.h>
#include<conio.h>
void main()
{
int b,c;
clrscr();
```

```
for(b=1;b<=10;b++)
{
c=5*b;
printf("\n\t%d*%d=%d\n",5,b,c);
getch();
}
}
```

Output :

Problem exercise no:1.7

Coding of the programme:

```
#include<stdio.h>
#include<conio.h>
void add();
void sub();
void main()
{
clrscr();
add();
sub();
getch();
}
void add()
```

```
{
printf("\n\t%d+%d=%d",20,10,30);
}
void sub()
{
printf("\n\t%d-%d=%d",20,10,10);
}
```

Output :

20+10=30

20-10=10

Problem exercise no:1.8

Coding:

```
#include<stdio.h>
#include<conio.h>
void main()
{
int a,b,c,x;
clrscr();
printf("Enter values of a,b&c\n");
scanf("%d%d%d",&a,&b,&c);
x=a/(b-c);
printf("result=%d",x);
```

```
getch();
}
```

Output:

a)

Enter values of a,b&c

250

85

25

result=4

b)NO OUTPUT

Problem exercise no:1.9 (b)

Coding :

```
#include<stdio.h>
#include<conio.h>
void main()
{
float a,F,C;
clrscr();
printf("ENTER TEMPERATURE IN FARENHITE\n");
scanf("%f",&F);
a=5*(F-32);
C=a/9;
printf("\nIn celsius scale=%f",C);
```

```
getch();
}
```

Output :

ENTER TEMPERATURE IN FARENHITE

10

In Celsius scale=-12.222222

Problem exercise no:1.9 (a)

Coding :

```
#include<stdio.h>
#include<conio.h>
void main()
{
float a,F,C;
clrscr();
printf("ENTER TEMPERATURE IN CELSIUS\n");
scanf("%f",&C);
a=(9*C)/5;
F=a+32;
printf("\nIn farenhite scale=%f",F);
getch();
}
```

Output:

ENTER TEMPERATURE IN CELSIUS

10

In frenhite scale=50.00000

Problem exercise no: 1.10

Coding of the problem:

```
#include<stdio.h>
#include<conio.h>
#include<math.h>
void main()
{
clrscr();
float a,b,c,S,A;
printf("\n\tENTER THE THREE SIDES OF A TRIANGLE=");
scanf("%f%f%f",&a,&b,&c);
S=(a+b+c)/2;
A=sqrt(S*(S-a)*(S-b)*(S-c));
printf("\n\tArea of the triangle=%f",A);
getch();
}
```

Sample output:

ENTER THE THREE SIDES OF A TRIANGLE=10

12

14

Area of the triangle=58.787754

Problem exercise no:1.11

Coding:

```
#include<stdio.h>
#include<conio.h>
#include<math.h>
void main()
{
float D,x1,x2,y1,y2;
printf("ENTER CO-ORDINATES x1,x2,y1,y2=\n");
scanf("%f%f%f%f",&x1,&x2,&y1,&y2);
D=sqrt((x1-x2)*(x1-x2)+(y1-y2)*(y1-y2));
printf("Result=%f",D);
getch();
}
```

Output :

```
ENTER CO-ORDINATES x1,x2,y1,y2=
2 4 8 5
Result=3.605551
```

Problem exercise no:1.12

Coding:

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

```
#include<math.h>
#define pi 3.14159

void main()
{
float r,x1,x2,y1,y2,A;
x1=0;
x2=0;
y1=4;
y2=5;
r=sqrt((x1-x2)*(x1-x2)+(y1-y2)*(y1-y2));
A=pi*r*r;
printf("Result=%f",A);
getch();
}
```

Output :

Result=3.14159

Problem exercise no:1.13

Coding:

```
#include<stdio.h>
#include<conio.h>
#include<math.h>
#define pi 3.14159
```

```
void main()
{ float D,r,x1,x2,y1,y2,A;
x1=2;
x2=2;
y1=5;
y2=6;
D=sqrt((x1-x2)*(x1-x2)+(y1-y2)*(y1-y2));
r=D/2;
A=pi*r*r;
printf("Result=%f",A);
getch();
}
```

Output :

Result=0.785398

Problem exercise no:1.14

Coding:

```
#include<stdio.h>
#include<conio.h>
void main()
{ int a,b,c;
clrscr();
a=5;
b=8;
```

```
c=18;
printf("%dx+%dy=%d",a,b,c);
getch();
}
```

Output :

5x+8y=18

Problem exercise no:1.15

Coding:

```
#include<stdio.h>
#include<conio.h>
void main()
{ float x,y,sum,difference,product,division;
clrscr();
printf("ENTER TWO NUMBERS=\n");
scanf("%f%f",&x,&y);
sum=x+y;
difference=x-y;
product=x*y;
division=x/y;
printf("\n\tSum=%f\tDifference=%f\n\n\tProduct=%f\tDivision=%f",sum,difference,product,division);
getch();
}
```

Output :

ENTER TWO NUMBERS=

10 5

Sum=15.000000 Difference=5.000000

Product=50.000000 Division=2.000000

Reference:

http://hstuadmission.blogspot.com/2010/12/solution-programming-in-ansi-c-chapter.html