CSA5734-FUNDAMENTALS OF COMPUTING WITH OPERATING SYSTEMS

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1.C program to convert decimal to hexadecimal .

C PROGRAM:

```
#include<stdio.h>
int main()
{
    int dec,rem,quo;
    int i=1,j,temp;
    char hexadecnum[100];
    printf("Enter any decimal number: ");
    scanf("%ld",&dec);
    quo=dec;
    while(quo!=0) {
        temp=quo%16;
        if( temp<10)
           temp=temp+48;
        else
           temp=temp+55;
        hexadecnum[i++]=temp;
        quo=quo/16;
    }
    printf("hexadecimal value of decimal number %d= ",dec);
    for (j=i-1;j>0;j--)
       printf("%c",hexadecnum[j]);
}
```

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2.C program to convert hexadecimal to decimal.

C PROGRAM:

```
#include <stdio.h>
int main()
{
   int n;
   printf("enter hexadecimal number: ");
   scanf("%x",&n);
   printf("decimal number is: %d",n);
   return 0;
}
```

3.C program to convert decimal to octal.

C PROGRAM:

```
#include <stdio.h>
int main()
{
   int num;
   printf("Enter the decimal number:  ");
   scanf("%d", &num);
   printf("Octal Number: %o", num);
}
```

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4.C program to convert octal to decimal.

C PROGRAM:

```
#include <stdio.h>
#include <math.h>
int main()
{

   int octal,decimal=0;
   int i=0;
   printf("Enter an octal number: ");
   scanf("%ld",&octal);
   while(octal!=0)
   {
      decimal=decimal+(octal%10)*pow(8,i++);
      octal=octal/10;
   }
   printf("Decimal value: %ld",decimal);
   return 0;
}
```

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5.C Program to read a number and find its square.

C PROGRAM:

```
#include<stdio.h>
int main()
{
    int sq,n;
    printf("enter a number ");
    scanf("%d",&n);
    printf("The given number is %d",n);
    sq=n*n;
    printf("\nsquare of given number=%d",sq);
}
```

6.C Program to find the biggest of three numbers.

C PROGRAM:

```
#include<stdio.h>
int main()
{
    float a,b,c;
    printf("enter a,b and c values ");
    scanf("%f%f%f",&a,&b,&c);
```

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```
 if(a>b && a>c)
 {
    printf("a is greatest");
 }
else if(b>c && b>a)
 {
 printf("b is greatest");
 }
else if(c>a && c>b)
 {
 printf("c is greatest");
 }
else
 {
 printf("same value");
 }
}
```

7.C Program to find leap year.

C PROGRAM:

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

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```
main()
{
    int n;
    printf("enter a year ");
    scanf("%d",&n);
    if(n>0)
    {
        if(n%4==0)
        {
                printf("leap year");
        }
        else
        {
                printf("not a leap year");
        }
    }
    else
    {
        printf("enter valid year");
    }
}
```

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8.C Program to prepare mark list using elif statement.

C PROGRAM:

```
#include<stdio.h>
int main()
{
    int m1,m2,m3,tot;
    float avg;
    printf("enter the three subject marks: ");
    scanf("%d%d%d",&m1,&m2,&m3);
    tot=m1+m2+m3;
    printf("total marks:%d\n",tot);
    avg=tot/3;
    printf("average:%f",avg);
    if (m1>=0 && m1<=100 && m2>=0 && m2<=100 && m3>=0 &&
m3<=100)
    {
        if (avg>=90)
        {
                printf("\ngrade A");
        }
        else if(avg<90 && avg>=80)
```

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```
    {
        printf("\nGrade B");
    }
    else if(avg<80 && avg>=70)
    {
        printf("\nGrade C");
    }
    else if(avg<70 && avg>=60)
    {
        printf("\nGrade D");
    }
    else if(avg<60 && avg>=50)
    {
        printf("\nGrade E");
    }
    else
    {
        printf("\nFail");
    }
}
else
```

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```
    {
        printf("\nenter the correct marks");
    }
}
```

9.C Program to perform arithmetic operation on two numbers.

C PROGRAM:

```
#include<stdio.h>
int main()
{
    float a,b;
    printf("enter a and b values");
    scanf("%f%f",&a,&b);
    printf("addition=%.2f",a+b);
    printf("\nsubbtraction=%.2f",a-b);
    printf("\nmultilpication=%.2f",a*b);
    printf("\ndivision=%.2f",a/b);
}
```

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10.C Program to print n natural number.

C PROGRAM:

```
#include<stdio.h>
int main()
{
    int n,i;
    printf("enter number");
    scanf("%d",&n);
    for(i=1;i<=n;i++)
    {
        printf("%d\n",i);
    }
    return 0;
}
```

11.C Program to find area of different shapes.

C PROGRAM:

```
#include<stdio.h>
#include<math.h>
int main()
{
    int exp;
```

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```
    float r,a1,a2,a3,a4;
    float l,b,h,s;
    printf("1.Area of circle \n2.Area of triangle \n3.Area of
square\n4.Area of rectangle");
    printf("\nenter a choice  ");
    scanf("%d",&exp);
    switch(exp)
    {
       case 1:
            printf("enter radius of circle");
            scanf("%f",&r);
            a1=3.14*r*r;
            printf("Area of circle=%.2f",a1);
            break;
       case 2:
            printf("enter breadth and heigth triangle ");
            scanf("%f %f",&b,&h);
            a2=0.5*b*h;
            printf("Area of triangle=%.2f",a2);
            break;
       case 3:
```

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```
            printf("enter side of square");
            scanf("%f/n%f",&s);
            a3=s*s;
            printf("Area of square=%.2f",a3);
            break;
        case 4:
            printf("enter length and breadth of rectangle ");
            scanf("%f %f",&l,&b);
            a4=l*b;
            printf("Area of rectangle=%.2f",a4);
            break;
        default:
            printf("enter valid choice");
    }
}
```

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12.C Program to check number is palindrome.

C PROGRAM:

```
#include<stdio.h>
int main()
{
    int n,r,sum=0,temp;
    printf("Enter the Number=");
    scanf("%d",&n);
    temp=n;
    while(n>0)
    {
        r=n%10;
        sum=(sum*10)+r;
        n=n/10;
    }
    if(temp==sum)
    printf("Number is Palindrome");
    else
    printf("Number is not Palindrome");
}
```