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**Course :BTech**

**Branch: Cs(AIML)**

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Que1: write a program to perform input/output of all basic data type.

Sol. #include "stdio.h"

int main()

{

char a;

int b;

float c;

double d;

printf("Enter a character: ");

a = getchar();

getchar();

printf("Enter an integer value: ");

scanf("%d", &b);

printf("Enter a float value: ");

scanf("%f", &c);

printf("Enter a double value: ");

scanf("%lf", &d);

```

printf("\nYou entered character: '%c' \n", a);
printf("You entered signed int: %d \n", b);
printf("You entered float: %f \n", c);
printf("You entered double: %lf \n", d);

return 0;
}

```

Que2: write a program to display your details.

Sol : #include<stdio.h>

void main()

{

```

printf("Name      : \t Akanksha\n");
printf("Class      : \t btech cs(aiml)\n");
printf("Contact no   : \n");
printf("University Roll no: \n");
}

```

Que3: write a program to add two number.

Sol : #include<stdio.h>

void main()

{

int k=5, j=10,c;

c=k+j;

```
printf("%d+%d=%d",k,j,c);  
}
```

Que4: write a program to calculate diameter, circumference, area of a circle.

Sol : #include<stdio.h>

```
void main()  
{  
    float r=5.3,d,c,a;  
    d=r*2;  
    c=2*3.14*r;  
    a=3.14*r*r;  
    printf("diameter of circle is %.2f",a);  
    printf("circumference of circle is %.2f",c);  
    printf("Area of circle is %.2f",a);  
}
```

Que05: write a program to enter length and breadth to print perimeter.

Sol: #include <stdio.h>

```
int main()  
{ int l,b,a;  
    scanf("%d%d",&l,&b);  
    a=2*(l+b);  
    printf("perimeter %d ",a);
```

```
    return 0;
}
```

Que06: write a program to enter length and breadth to print area.

Sol: #include <stdio.h>

```
int main()
{
    int l,b,a;
    scanf("%d%d",&l,&b);
    a=l*b;
    printf("area %d ",a);

    return 0;
}
```

Que07: write a program to convert centimeter into meter and kilometer.

Sol: #include <stdio.h>

```
int main()
{
    float c,m,km;
    scanf("%f",&c);
    m=c/100;
    km=c/100000;
    printf("%.2f\n%f",m,km);
}
```

```
    return 0;
}
```

Que08: write a program to convert celcius into fehrenhit.

Sol: #include<stdio.h>

```
int main()
{
    int c,f;
    scanf("%d",&c);
    f=(c*9/5)+32;
    printf("%d",f);
    return 0;
}
```

Que09: write a program to convert fehrenheit to celcius.

Sol: #include<stdio.h>

```
int main()
{
    int c,f;
    scanf("%d",&f);
    C = (F - 32)*5/9;
    printf("%d",c);
    return 0;
}
```

Que10: write a program to calculate power of a number.

Sol: #include<stdio.h>

```
#include <math.h>

void main()
{
    int a,n,p;
    scanf("%d%d",&a,&n);
    p=pow(a,n);
    printf("%d",p);

}
```

Que11: write a program to calculate square root of a given number.

Sol: #include<stdio.h>

```
#include <math.h>

void main()
{
    int a,p;
    scanf("%d",&a);
    p=sqrt(a);
    printf("%d",p);

}
```

Que12:write a program to enter two angle print third angle.

Sol: #include<stdio.h>

```
void main()
{
```

```
int a,b,c;
scanf("%d%d",&a,&b);
c=180-(a+b);
printf("%d",c);

}
```

Que13:write a program to enter base and height and print area.

Sol: #include<stdio.h>

```
int main()
{
    int b,h,a;
    scanf("%d%d",&b,&h);
    a=(b*h)/2;
    printf("area %d",a);
    return 0;
}
```

Que14:write a program to calculate area of equilateral triangle.

Sol: #include<stdio.h>

```
int main()
{
    int s,a;
    scanf("%d",&s);
    a=(1.73*s*s)/4;
    printf("area %d",a);
}
```

```
    return 0;
}
```

Que15: write a program to enter marks of five subjects and calculate total, average and percentage.

Sol: #include <stdio.h>

```
int main()
{
    int n1, n2, n3, n4, n5; float total, avg, per;
    printf("Enter number for subject 1: ");
    scanf("%d",n1);
    printf("Enter number for subject 2: ");
    scanf("%d",n2);
    printf("Enter number for subject 3: ");
    scanf("%d",n3);
    printf("Enter number for subject 4: ");
    scanf("%d",n4);
    printf("Enter number for subject 5: ");
    scanf("%d",n5);
    total= n1+n2+n3+n4+n5;
    avg = total/5;
    per= (total/500)*100;
    printf("Total=",total);
    printf("Average=",avg);
}
```



```
printf("Percentage=",per);  
return 0;  
}
```

Que16: write a program to enter P,T,R to calculate simple interest.

Sol: #include<stdio.h>

```
int main()  
{  
    int p,t,r,SI;  
    scanf("%d%d%d",&p,&t,&r);  
    SI=(p*t*r)/100;  
    printf("simple interest %d",SI);  
    return 0;  
}
```

Que17: write a program to enter P,T,R to calculate compound interest.

Sol: #include<stdio.h>

#include<math.h>

```
int main()  
{  
    int p,t,r,n,SI;  
    scanf("%d%d%d%d",&p,&t,&r,&n);  
    SI=pow((p*(1+(r*t)/100),n);  
    printf("compound interest %d",CI);  
    return 0;
```

}