CODE: CSA0238

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Basic Input/Output and Operators (2/8/25)

1.Write a C program to add two integers

IPO

- Input: get two values as input say a and b
- Process: add the two inputs using the formula c=a+b
- Output: the output is to print the sum of two integers

Program

```
#include <stdio.h>
void main()
{
    int a,b,c;
    printf("Enter value of a : ");
    scanf("%d", &a);
    printf("Enter value of b: ");
    scanf("%d", &b);
    c=a+b;
    printf("c= %d\n",c);
}
```

output

```
Enter value of a : 3
Enter value of b: 4
c= 7
```

2. Write a program to swap two numbers using a temporary variable.

IPO

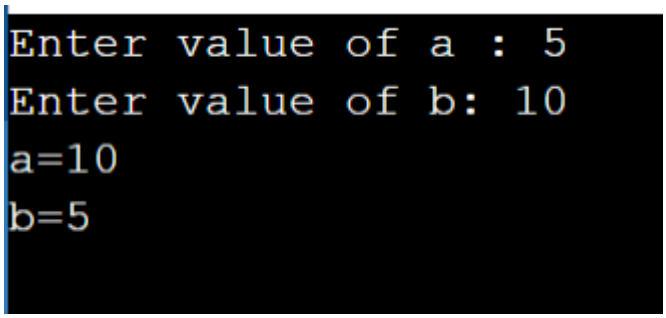
- Input: Get two values as input, say a and b.
- Process**:** Swap the values of a and b using a temporary variable with the logic:
  c = a; a = b; b = c;
- Output**:** The output is to print the values of a and b after swapping.

Program

```
#include <stdio.h>

void main()

{

    int a,b,c;

    printf("Enter value of a : ");

    scanf("%d", &a);

    printf("Enter value of b: ");

    scanf("%d", &b);

     c=a;

     a=b;

     b=c;
```

```
    printf("a=%d\nb=%d\n",a,b);
}
```

output



3. Write a program to swap two numbers without using a temporary variable.

IPO

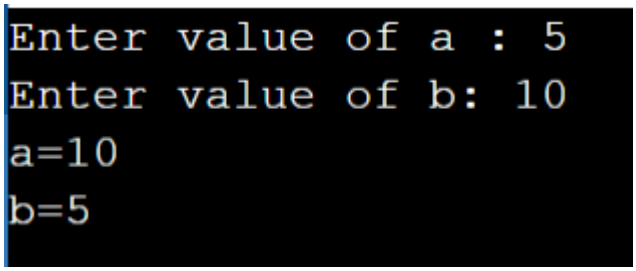
- Input**:** Get two values as input, say a and b.
- Process**:** Swap the values of a and b without using a third variable ,
  a = a + b;
  b = a - b;
  a = a - b;
- Output**:** The output is to print the values of a and b after swapping.

Program

```
#include <stdio.h>
void main()
{
    int a,b;
    printf("Enter value of a : ");
```

```
    scanf("%d", &a);
    printf("Enter value of b: ");
    scanf("%d", &b);
    a=a+b;
   b=a-b;
   a=a-b;
   printf("a=%d\nb=%d\n",a,b);
}
```

output



4. Write a program to find the ASCII value of a character

IPO

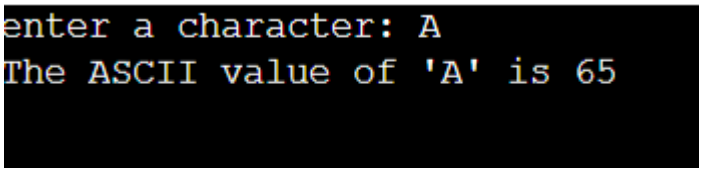
- Input: Get a character as input say ch.
- Process: Find the number (ASCII value) for that character.
- Output**:** The output is to print the ASCII the entered character.

Program

```
#include<stdio.h>
void main()
```

```
{
    char ch;
    printf(“enter a character: “);
    scanf(" %c", &ch);
    printf("The ASCII value of '%c' is %d\n", ch, ch);
}
```

output



5. Write a program to calculate the area and perimeter of a rectangle.

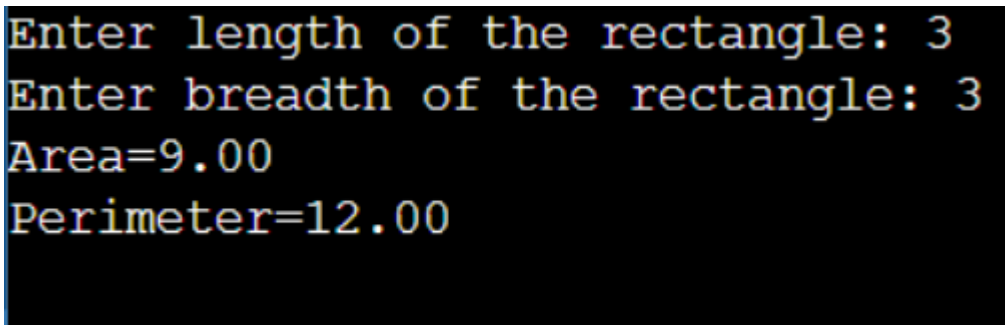
IPO

- Input:
  Get two values as input length and breadth of the rectangle.
- Process:
- Calculate the area using the formula: area = length * breadth
- Calculate the perimeter using the formula: perimeter = 2 * (length + breadth)
- Output:
  The output is to print the area and perimeter of the rectangle.

Program

```
#include<stdio.h>
void main()
{
   float area,perimeter,length,breadth;
   printf("Enter length of the rectangle: ");
   scanf("%f",&length);
   printf("Enter breadth of the rectangle: ");
   scanf("%f",&breadth);
   area=length*breadth;
   perimeter=2*(length+breadth);
   printf("Area=%.2f\n",area);
   printf("Perimeter=%.2f\n",perimeter);
}
```

output



6. Write a program to compute the simple interest.

IPO

- Input:
  Get three values as input say p,r,t
- Process:
  Calculate the simple interest using the formula:
  simple interest = (p *r * t) / 100
- Output:
  The output is to print the calculated simple interest.

Program

```
#include<stdio.h>
void main()
{
   float p,r,t,a;
   printf("enter value of p:");
   scanf("%f",&p);
   printf("enter value of r:");
   scanf("%f",&r);
   printf("enter value of t:");
   scanf("%f",&t);
   a=(p*r*t)/100;
   printf("simple interest is %.2f",a);
}
```

output

```
enter value of p:34
enter value of r:44
enter value of t:32
simple interest is 478.72
```

7. Write a program to convert temperature from Celsius to Fahrenheit.

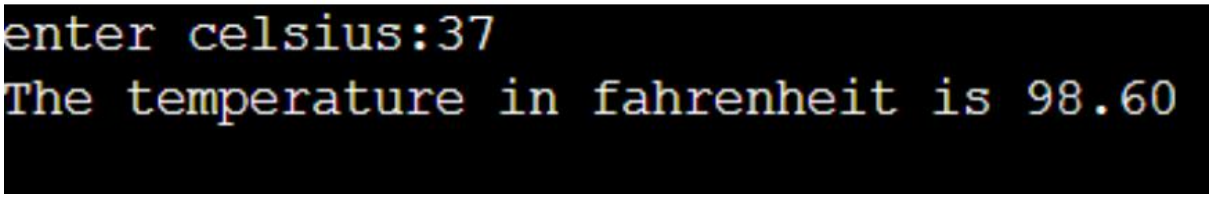
IPO

- Input:
  Get one value as input say c
- Process:
  Convert Celsius to Fahrenheit using the formula:
  fahrenheit = (celsius * 9 / 5) + 32
- Output:
  The output is to print the temperature in Fahrenheit.

Program

```
#include<stdio.h>
void main()
{
   float c,f;
   printf("enter celsius:");
   scanf("%f",&c);
   f=(c*9/5)+32;
   printf("The temperature in fahrenheit is %.2f",f);
}
```

output



8. Write a program to find the quotient and remainder of two integers.

IPO

- Input:
  Get two values as input num1 and num2.
- Process:

  Calculate the quotient using: quotient = num1/num2

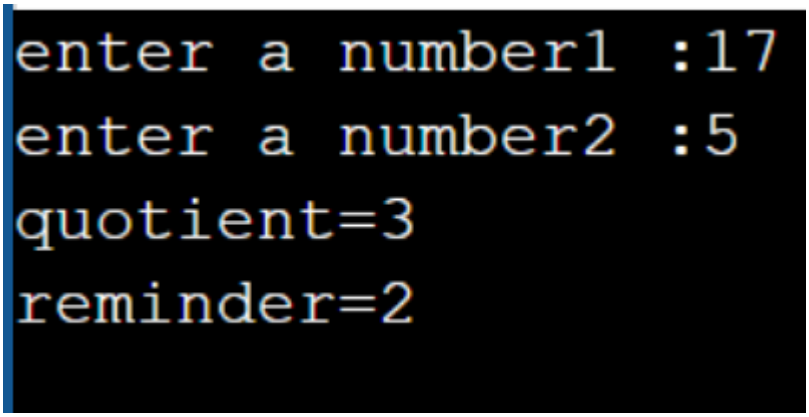
  Calculate the remainder using: remainder = num1%num2
- Output:
  The output is to print the quotient and remainder of the given the given numbers .

Program

```
#include<stdio.h>
void main()
{
   int num1,num2,quotient,reminder;
   printf("enter a number1 :");
```

```
    scanf("%d",&num1);
    printf("enter a number2 :");
    scanf("%d",&num2);
    quotient=num1/num2;
    reminder=num1%num2;
    printf("quotient=%d\n",quotient);
    printf("reminder=%d\n",reminder);
}
```

output



9. Write a program to check whether a number is even or odd.

IPO

- Input:
  Get one integer as input say num.
- Process:
  Check the remainder when the number is divided by 2 using the condition:

    If num % 2 == 0, it's even

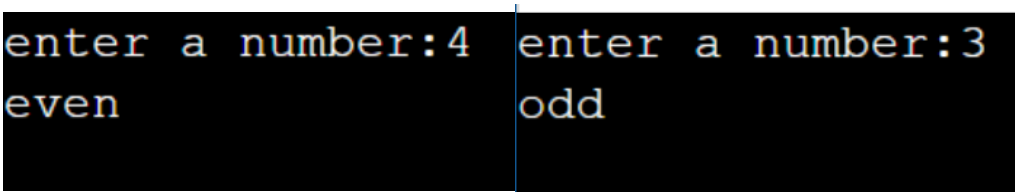
Otherwise, it's odd

- Output:
  The output is to print whether the number is Even or Odd.

Program

```
#include<stdio.h>
void main()
{
   int num;
   printf("enter a number:");
   scanf("%d",&num);
   if(num%2==0)
   printf("even");
   else
   printf("odd");
}
```

output



10. Write a program to calculate the square and cube of a number.

IPO

- Input:
  Get one number as input , say num.
- Process:

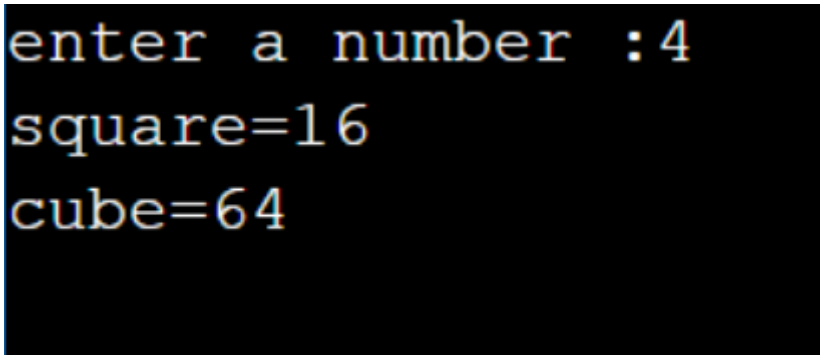
  Calculate the square using the formula: square = num * num

  Calculate the cube using the formula: cube = num * num * num
- Output:
  The output is to print the square and cube of the given number

Program

```
#include<stdio.h>
void main()
{
   int num,square,cube;
   printf("enter a number :");
   scanf("%d",&num);
   square=num*num;
   cube=num*num*num;
  printf("square=%d\n",square);
  printf("cube=%d\n",cube);
}
```

output


enter a number :4
square=16
cube=64