1- Calculate (5^6) without using the program

Solution

```
3
```

2- Calculate (5^7) without using the program

Solution

```
2
```

3- Calculate (5^2) without using the program

Solution

```
7
```

4- Calculate (12^8) without using the program

Solution

```
4
```

5- Calculate (20^7) without using the program

Solution

```
28
```

6- Calculate (30^15) without using the program

Solution

```
17
```

7- Calculate (50^30) without using the program

Solution

```
44
```

8- Write a program that performs bitwise XOR (exclusive OR) operation between two given integers and prints the result.

اكتب برنامجًا ينفذ عملية XOR بين عددين صحيحين محددين ويطبع النتيجة.

Output

```
Result of bitwise XOR operation between 5 and 6: 3
```

Solution

```c
//www.gammal.tech

#include <stdio.h>

int main() {
    int x = 5, y = 6;
    int result = x ^ y;

    // Output: Display the result
    printf("Result of bitwise XOR operation between %d and %d: %d\n", x, y, result);

    return 0;
}
```

9- Write a program that takes two integers as input from the user, performs a bitwise XOR (exclusive OR) operation between them, and prints the result.

اكتب برنامجًا يأخذ عددين صحيحين كمدخلات من المستخدم، وينفذ عملية XOR بينهما، ويطبع النتيجة.

Input

```
Enter two numbers: 5 7
```

Output

```
Result of bitwise XOR operation between 5 and 7: 2
```

Solution

```c
//www.gammal.tech

#include <stdio.h>

int main() {
    int x, y;

    // Input: Get two numbers from the user
    printf("Enter two numbers: ");
    scanf("%d %d", &x, &y);

    // Bitwise XOR operation
    int result = x ^ y;

    // Output: Display the result
    printf("Result of bitwise XOR operation between %d and %d: %d\n", x, y, result);

    return 0;
}
```

10- Write a program that swaps the values of two integers without using a temporary variable.

اكتب برنامجًا يقوم بتبديل قيم عددين صحيحين without using a temporary variable

Output

```
After swapping: x=7, y=5
```

Solution

```c
//www.gammal.tech

#include <stdio.h>

int main() {
    int x = 5, y = 7;

    // Swap without using a temporary variable
    x = x ^ y;
    y = x ^ y;
    x = x ^ y;

    // Output: Display the swapped values
    printf("After swapping: x=%d, y=%d\n", x, y);

    return 0;
}
```