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Write a program that takes a year as input and determines whether it is a leap year or not.

Program In C

C

```
#include <stdio.h>

int main() {
    int year;

    printf("Enter a year: ");
    scanf("%d", &year);

    if ((year % 4 == 0 && year % 100 != 0) || year % 400 == 0) {
        printf("%d is a leap year.\n", year);
    } else {
        printf("%d is not a leap year.\n", year);
    }

    return 0;
}
```

Explanation:

1. We include the `<stdio.h>` header file to use `printf` and `scanf` functions.

2. In the main function, we declare an integer variable year to store the user input.
3. We prompt the user to enter a year using printf.
4. We read the user input using scanf and store it in the variable year.
5. We use an if-else statement to check if the year is a leap year or not.
6. The condition `(year % 4 == 0 && year % 100 != 0) || year % 400 == 0` checks whether the year is divisible by 4 but not by 100, or if it is divisible by 400. These are the conditions for a leap year.
7. If the condition is true, we print that the year is a leap year.
8. If the condition is false, we print that the year is not a leap year.
9. Finally, we return 0 to indicate successful execution of the program.

Output:

Output ➔

```
Enter a year: 2020
2020 is a leap year.
```

Program In Java

Java ➔

```
import java.util.Scanner;

public class LeapYearChecker {
```

```
public static void main(String[] args) {  
    int year;  
  
    Scanner scanner = new Scanner(System.in);  
    System.out.print("Enter a year: ");  
    year = scanner.nextInt();  
  
    if ((year % 4 == 0 && year % 100 != 0) || year % 400 == 0) {  
        System.out.println(year + " is a leap year.");  
    } else {  
        System.out.println(year + " is not a leap year.");  
    }  
  
    scanner.close();  
}
```

Explanation:

Java

```
Enter a year: 2022  
2022 is not a leap year.
```

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