

Q1. Write a Python Program to Check if a Number is Positive, Negative or Zero?

```
number = float(input("Enter a number: "))  
if number > 0:  
    print("The number is positive.")  
elif number < 0:  
    print("The number is negative.")  
else:  
    print("The number is zero.")
```

Q2. Write a Python Program to Check if a Number is Odd or Even?

```
num = int(input("Enter a number: "))  
if num % 2 == 0:  
    print(f"{num} is even.")  
else:  
    print(f"{num} is odd.")
```

Q3. Write a Python Program to Check Leap Year?

```
year = int(input("Enter a year: "))  
if (year % 4 == 0 and year % 100 != 0) or year % 400 == 0:  
    print(f"{year} is a leap year.")  
else:  
    print(f"{year} is not a leap year.")
```

Q4. Write a Python Program to Check Prime Number?

```
num = int(input("Enter a number: "))
is_prime = True

if num > 1:
    for i in range(2, num):
        if num % i == 0:
            is_prime = False
            break

if is_prime and num > 1:
    print(f"{num} is a prime number.")
else:
    print(f"{num} is not a prime number.")
```

Q5. Write a Python Program to Print all Prime Numbers in an Interval of 1-10000?

```
lower = 1
upper = 10000
print(f"Prime numbers between {lower} and {upper} are:")
for num in range(lower, upper + 1):
    if num > 1:
        is_prime = True

        for i in range(2, int(num**0.5) + 1):
            if num % i == 0:
                is_prime = False
                break

        if is_prime:
            print(num)
```