

## Data Structures and Algorithms - Answer Sheet

**Answer to: Write a Python program to check whether a number is a prime number**

Explanation:

This Python program prompts the user to enter a number and checks whether it is a prime number.

A prime number is a number that has only two factors: 1 and itself.

The code is meant to handle edge cases and check for divisibility.

```
# Python program to check if a number is a prime number
```

```
num = int(input("Enter a number"))
```

```
if num < 2
```

```
    print(num, "is not a prime number.")
```

```
else
```

```
    for i in range(2, int(num**0.5) + 1)
```

```
        if num % i == 0:
```

```
            print(num, "is not a prime number.")
```

```
            break
```

```
else:
```

```
    print(num, "is a prime number.")
```