

# Programming Assignment\_3

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

Answer:

In [4]:

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

Enter the number-43  
The number is negative

In [ ]:

In [ ]:

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

Answer:

In [5]:

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

Enter the number43  
The number 43 is odd

In [6]:

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

Enter the number98  
The number 98 is even

In [ ]:

In [ ]:

Q3. Write a Python Program to Check Leap Year?

Answer:

In [10]:

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

Enter the year2020  
The year 2020 is leap year

In [9]:

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

Enter the year2013  
The year 2013 is not a leap year

In [ ]:

In [ ]:

Q4. Write a Python Program to Check Prime Number?

Answer:

In [12]:

```
a=int(input("Enter the number"))
c=0
for i in range(1,a+1):
    if(a%i==0):
        c+=1
if(c==2):
    print(f"The number {a} is a prime number")
else:
    print(f"The number {a} is not a prime number")
```

Enter the number3  
The number 3 is a prime number

In [13]:

```
a=int(input("Enter the number"))
c=0
for i in range(1,a+1):
    if(a%i==0):
        c+=1
if(c==2):
    print(f"The number {a} is a prime number")
else:
    print(f"The number {a} is not a prime number")
```

Enter the number2  
The number 2 is a prime number

In [14]:

```
a=int(input("Enter the number"))
c=0
for i in range(1,a+1):
    if(a%i==0):
        c+=1
if(c==2):
    print(f"The number {a} is a prime number")
else:
    print(f"The number {a} is not a prime number")
```

Enter the number17  
The number 17 is a prime number

In [15]:

```
a=int(input("Enter the number"))
c=0
for i in range(1,a+1):
    if(a%i==0):
        c+=1
if(c==2):
    print(f"The number {a} is a prime number")
else:
    print(f"The number {a} is not a prime number")
```

Enter the number20  
The number 20 is not a prime number

In [ ]:

In [ ]:

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

Answer:

In [3]:

```
c=0
for i in range(2,10000+1):
    for j in range(1,i+1):
        if(i%j==0):
            c+=1
    if(c==2):
        print(j,end=' ')
    c=0
print()
print("These are all the prime numbers between 1 and 10000")
```

2 3 5 7 11 13 17 19 23 29 31 37 41 43 47 53 59 61 67 71 73 79 83 89 97 101 103 107 109 113 127 131 137 139 149 151 157 163 167 173 179 181 191 193 197 199 211 223 227 229 233 239 241 251 257 263 269 271 277 281 283 293 307 311 313 317 331 337 347 349 353 359 367 373 379 383 389 397 401 409 419 421 431 433 439 443 449 457 461 463 467 479 487 491 499 503 509 521 523 541 547 557 563 569 571 577 587 593 599 601 607 613 617 619 631 641 643 647 653 659 661 673 677 683 691 701 709 719 727 733 739 743 751 757 761 769 773 787 797 809 811 821 83 827 829 839 853 857 859 863 877 881 883 887 907 911 919 929 937 941 947 953 967 971 977 983 991 997 1009 1013 1019 1021 1031 1033 1039 1049 1051 1061 1063 1069 1087 1091 1093 1103 1109 1117 1123 1129 1151 1153 1163 1171 1181 1187 1193 1201 1213 1217 1223 1229 1231 1237 1249 1259 1277 1279 1283 1289 1291 1297 1301 1303 1307 1319 1321 1327 1361 1367 1373 1381 1399 1409 1423 1427 1429 1433 1439 1447 1451 1453 1459 1471 1481 1483 1487 1489 1493 1499 1511 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These are all the prime numbers between 1 and 10000

In [ ]:

In [ ]: