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```
x1,x2,y1,y2 = map(int,input().split())
```

```
1 2 3 4
```

```
if x2-x1==0:
    print("Vertical line")
elif (y2-y1)/(x2-x1)>0:
    print("Postive slope")
elif (y2-y1)/(x2-x1)<0:
    print("Negative slope")
else:
    print("Horizontal line")
```

```
Postive slope
```

```
print("Celcius Fahrenheit")
for i in range(10,21):
    print(i,"     ",(9/5)*i+32)
```

```
Celcius Fahrenheit
10       50.0
11       51.8
12       53.6
13       55.400000000000006
14       57.2
15       59.0
16       60.8
17       62.6
18       64.4
19       66.2
20       68.0
```

```
lst =[13,12,11,13,14,13,7,7,13,14,12]
unique = set(lst)
d={}
temp=[]
for i in unique:
    r=0
    for j in lst:
        if i==j:
            r+=1
    temp.append([i,r])

temp
```

```
def sortSecond(val):
    return val[1]
temp.sort(key=sortSecond)
temp
```

```
[[11, 1], [7, 2], [12, 2], [14, 2], [13, 4]]
```

```
temp.sort(key=sortSecond, reverse=True)
temp
```

```
[[13, 4], [7, 2], [12, 2], [14, 2], [11, 1]]
```

```
n=5
flag=0
if n==1 or n==0:
    print("Not a prime")
elif n==2:
    print("Prime")
else:
    for i in range(2,n):
        if n%i==0:
            flag=1
            break
if flag==1:
    print("Not prime")
else:
    print("Prime")
```

```
Prime
```

```
flag=0
n=90
if n==1 or n==0:
    print("Not a prime")
elif n==2:
    print("Prime")
else:
    for i in range(2,n):
        if n%i==0:
            flag=1
            break
if flag==1:
    print("Not prime")
else:
    print("Prime")
```

```
Not prime
```

```
def fact(n):
    if n==1:
        return 1
    else:
        return n*fact(n-1)
print(fact(5))
```

```
120
```

```
n=5
fact=1
for i in range(1,6):
    fact = fact*i
fact
```

```
120
```

```
lst = [1,2,3,4,5,6,7,8,9,10]

result = filter(lambda x: x % 2== 0, lst)
print(list(result))
```

```
[2, 4, 6, 8, 10]
```

```
lst = [1,2,3,4,5,6,7,8,9,10]

result = map(lambda x: x % 2== 0, lst)
print(list(result))
```

```
[False, True, False, True, False, True, False, True, False, True]
```

```
def check(n):
    return n%2==0
numbers = [1, 2, 3, 4]
result = map(check, numbers)
print(list(result))
```

```
[False, True, False, True]
```