```
import numpy as np
c1=[1,1,1,1]
c2=[1,-1,1,-1]
c3=[1,1,-1,-1]
c4=[1,-1,-1,1]
rc=[]
```

```
print("Enter the data bits:")
d1=int(input("Enter D1:"))
d2=int(input("Enter D2: "))
d3=int(input("Enter D3: "))
d4=int(input("Enter D4 :"))
r1=np.multiply(c1,d1)
r2=np.multiply(c2,d2)
r3=np.multiply(c3,d3)
r4=np.multiply(c4,d4)
resultant_channel=r1+r2+r3+r4;
print("Resultant Channel",resultant_channel)
Channel=int(input("Enter the station to listen for c1=1,c2=2,c3=3,c4=4:"))
if Channel==1: rc=c1
elif Channel==2: rc=c2
elif Channel==3: rc=c3
elif Channel: rc=c4
inner_product=np.multiply(resultant_channel,rc)

print("inner_Product", inner_product)
res1=sum(inner_product)
data=res1/len(inner_product)
print("Data hit that was sent", data)
```

```
Enter the data bits:
Enter D1:23
Enter D2: 5
Enter D3: 456
Enter D4 :56
Resultant Channel [ 540  418 -484 -382]
Enter the station to listen for c1=1,c2=2,c3=3,c4=4:1
inner_Product [ 540  418 -484 -382]
Data hit that was sent 23.0
```