```
Enter 1 for channel
Enter 2 for Bandwidth
Enter 3 for Snr

Enter the number :-3
Enter the Channel Capacity =12000
Enter the Bandwidth =3000
The snr is 15.0
Made By Varad Patil  120A2036
>
```

```
Enter 1 for channel
Enter 2 for Bandwidth
Enter 3 for Snr

Enter the number :-2
Enter the Channel Capacity =12000
Enter the SNR =15
The Bandwidth is 3000.0 Hz
Made By Varad Patil  120A2036
>
```

```
Enter 1 for channel
Enter 2 for Bandwidth
Enter 3 for Snr

Enter the number :-1
Enter the Bandwidth =3000
Enter the SNR =15
The Gaussian channel capacity is 12000.0 bps
Made By Varad Patil  120A2036
>
```

```python
import math
print('''Enter 1 for channel
Enter 2 for Bandwidth
Enter 3 for Snr\n''')
a  = int(input('Enter the number :-'))
if a ==1:
    B = float(input('Enter the Bandwidth ='))
    snr = float(input('Enter the SNR ='))
    C=B*math.log2(1+snr)
    print('The Gaussian channel capacity is',C,'bps')
elif a == 2:
    C = float(input('Enter the Channel Capacity ='))
    snr = float(input('Enter the SNR ='))
    B = C/math.log2(1+snr)
    print('The Bandwidth is',B,'Hz')
elif a == 3:
    C = float(input('Enter the Channel Capacity ='))
    B = float(input('Enter the Bandwidth ='))
    snr = 2**(C/B)-1
    print('The snr is',snr)
else:
    print('Enter the valid number 1 2 3 ')
print("Made By Varad Patil  120A2036")
```