```cpp
1  //Nhan Vo And Ian Lee
2  // CECS 282 LAB 1-Problem 2
3  #include<iostream>
4  using namespace std;
5  /*
6  bin2Dec function:
7  Take a reference of a string as parameter
8  if the char in the string is not 0, add to sum
9  implement the power.
10 */
11 int bin2Dec(const string& binaryString){
12
13     int power=1;
14     int sum=0;
15     int factor=2;
16
17     //Iterate through the binary string
18     for(int i=binaryString.length()-1;i>-1;i--){// Start from the right most of    ⏎
         the binary string
19
20         if(binaryString[i]!='0'){//If the binary string character is not 0
21
22             sum+=power;// start increment into sum
23
24         }
25
26         power*=factor;// increment power by the factor of 2
27
28     }
29
30     return sum;
31
32 }
33 /*
34 Driver:
35 Take string input from the user and pass it as a parameter to bin2Dec function
36 output the result.
37 */
38 int main()
39 {
40     string input;//Initialize the user's input holder
41
42     cout<<"Please enter your binary number"<<endl;
43
44     cin>>input;//store the input
45
46     cout<<"Binary Conversion: "<<bin2Dec(input)<<endl;// call bin2Dec function and ⏎
         output result.
47
48     return 0;
49 }
50
```

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```
Please enter your binary number
10001
Binary Conversion: 17


...Program finished with exit code 0
Press ENTER to exit console.
```