Loop 2 assignment

Q1 Predict the output

```
#include <bits/stdc++.h>
using namespace std;
int main() {
 while ('1' < '2')
cout << "In while loop" << endl;
}
```

Output :- infinite loop

Q 2. Predict the output

#include using namespace std;

int main( ) {

int t = 10;

while (t /= 2)

{ cout << "Hello" << endl; }

}

Output:-

Hello

Hello

Hello

Hello

Hello

Q 3. Predict the output

```
#include <bits/stdc++.h>
using namespace std;
int main( ) {
for (int x = 1; x * x <= 10; x++)
cout << "In for loop" << endl;
}
```

Q 4. Predict the output

```
#include <bits/stdc++.h>
using namespace std;
int main( ) {
int x = 10, y = 0 ;
while ( x >= y ) {
x-- ;
y++ ;
cout << x << " " << y << endl ;
}
}
```

Q 5. WAP to print the sum of all the even digits of a given number

Sample Input : 4556

Output: 10 WAP

```
#include<iostream>
using namespace std;
int main( ) {
int n ,m;
cout<<"enter a numbr:";
cin>>n;
int count=0 ;
while ( n>0) {
m = n%10;
if(m%2==0){
    count=count+m;
}
n/=10;
}
cout<<count;
return 0;
}
```

Q 6. WAP to print the sum of a given number and its reverse.

Sample Input : 12

Sample Output : 33 [12+21]

```
#include<iostream>
using namespace std;
int main( ) {
int n ,m=0;
cout<<"enter a numbr:";
cin>>n;
int o=n;
int k=0;
```

```
while ( n>0) {
m = n%10;
k*=10;
k+=m;

n/=10;
}
cout<<k+o;
return 0;
}
```

Q 7. Print the factorials of first ‘n’ numbers Sample Input : 10 Output : 1 2 6 24 120 720 5040 40320 362880 3628800

```
#include<iostream>
using namespace std;
int main( ) {
int n,m=1;
cout<<"enter a numbr:";
cin>>n;

for(int i=1;i<=n;i++){
   m=m*i;
}
cout<<m;
return 0;
}
```

Q 8. Print first ‘n’ fibonacci numbers.

Sample Input : 10

Output :

```
#include<iostream>
using namespace std;
int main( ) {
int n,a=1,b=1;
cout<<"enter a numbr:";
cin>>n;
int sum;
cout<<a<<" "<<b<<" ";
for(int i=3;i<=(n);i++){
    sum=a+b;

   a=b;
   b=sum;
   cout<<b<<" ";
}
```

```
return 0;
}
```

Q 9. Write a program to print out all Armstrong numbers between 1 and 500. If the sum of cubes of each digit of the number is equal to the number itself, then the number is called an Armstrong number. For example, 153 = (1 * 1 * 1) + (5 * 5 * 5) + (3 * 3 * 3) Output : 1 153 370 371 407

```
#include<iostream>
using namespace std;
int main( ) {

for(int i=1;i<=500;i++){
   int x=0,j=i;
   while(j>0){
   int m=j%10;
    x+=m*m*m;
    j/=10;
   }
   if(i==x)
   cout<<i<<endl;
}

return 0;
}
```