

# Problems On Time Complexity

## Assignment Questions



**Q1. Calculate the time complexity of the given function:**

(Hard)

```
void function(int n)
{
    int i = 1, s = 1;
    while (s < n) {
        s = s + i;
        i++;
    }
}
```

**Q2. Calculate the time complexity of the given function:**

(Easy)

```
void fun(int n)
{
    if (n < 5) {
        cout<<"College Wallah";
    }
    else {
        for (int i = 0; i < n; i++) {
            cout<<i+" ";
        }
    }
}
```

**Q3. Calculate the time complexity of the given function:**

(Medium)

```
void fun(int a, int b){
    while (a != b) {
        if (a > b){
            a = a - b;
        }
        else{
            b = b - a;
        }
    }
}
```

**Q4. Calculate the time complexity of the given function:**

(Medium)

```
void fun(int n, int x){
    for (int i = 1; i < n; i = i * x)
        cout<<"hello";
}
```

**Q5. Calculate the time complexity of the given function:**

(Hard)

```
void fun(int n){  
    for (int i = 0; i < n / 2; i++)  
        for (int j = 1; j + n / 2 <= n; j++)  
            for (int k = 1; k <= n; k = k * 2)  
                cout<<"hello";  
}
```