SLIIT City Uni – 2025
anuruddha.a@sliit.lk

Design and Analysis of Algorithm

Tutorial 01

1. What is the Algorithm and what are the properties of it?
2. Briefly explain the 04 main algorithm Design Techniques.
3. How to analyze Time Complexity?
4. Calculate the running time as **Operation count** for the following process parts.

Task 01	Task 02

int i= 10;
while (i>=2)
{
printf(“Hello”);
i=i-2;
}
	int sum = 0;
	for (int i = 1; i <= 10; i++) {
	sum += i;
	}
	print(sum);

5. Calculate the running time as **Step count** for the following process parts.

Task 01	Task 02

int i= 10;
while (i>=2)
{
printf(“Hello”);
i=i-2;
}
	int sum = 0;
	for (int i = 1; i <= 10; i++) {
	sum += i;
	}
	print(sum);

6. Illustrate the operation of the **Insertion sort** on the array A=< 33, 24,16,12 >
7. What is the Best case and Worst Case in Insertion Sort Algorithm?