

**Assignment 3: Data Structures Div A Batch B2**

Sr. No	Problem statement	Roll Nos	
1	A person is living in house having five rooms. These rooms are adjacent to each other. There is a treasure which is electronically locked and to unlock it we need a code. In fifth room there is a box in which decimal number is written. We need to convert that number into binary to open treasure which is kept in first room. We need to move from room no. 1 to 2 to 3 and so on and follow the reverse way to come back i.e. from 5 to 4 to 3 etc. Apply suitable logic to implement this scenario using stack.	2	7
2	Write a program to implement following operations using stack. A. Factorial of a given number B. Generation of Fibonacci series. C. Decimal to binary conversion	8	38
3	Normally we write our name in order of First name, Middle name and Surname. We need to accept these three words in a single string. Write a program to arrange these three words in order of Surname, First name and Middle name using STACKs only.	55	48
4	Write a program to convert a given Infix expression into its equivalent Postfix expression and evaluate it using stack	58	45
5	Write a program to convert a given Infix expression into its equivalent Prefix expression and evaluate it using stack	59	49
6	Write a program to convert a given Prefix expression into its equivalent Postfix expression and evaluate it using stack	61	
7	Write a program to convert a given Prefix expression into its equivalent Infix expression and evaluate it using stack	68	
8	Write a program to convert a given Postfix expression into its equivalent Prefix expression and evaluate it using stack	69	
9	Write a program to convert a given Postfix expression into its equivalent Infix expression and evaluate it using stack	70	
10	WAP to find Max and Min. from set of elements using explicit stack. Show the simulation of your program in output.	72	
11	WAP to check the given string is a palindrome or not? using explicit stack.	62	

12	WAP to traverse the heap of the array elements using explicit stack.	51	
13	Write a program to convert binary number into decimal using explicit stack.	15	
14	Write a program to implement multiple stack i.e. two stacks using array and perform following operations on it. A. Push, B. Pop, C. StackFull, D. StackEmpty, E. Display full stack, F. Display selected Stack	66	
15	Write a program to print the table of positive integer using explicit stack	63	
16	Write a program to find $x^n$ using explicit stack	64	
17	Write a program to find GCD of a given integer using explicit stack.	65	
18	Write a program to print the sum of first n numbers using explicit stack	67	
19.	Write a program to generate the sine series using explicit stack	12	