

Sarvajani College of Engineering & Technology, Surat
Computer Engineering Department
Extra Practical List
B.E.(II)CO, Sem : 3
Data and File Structure [2130702]

1.	Design a Stack, which performs the following operations: <ul style="list-style-type: none">• Reverse a line of text• Convert a number in base 10 to base 2.• Check the string for the PALINDROM provided middle character is always 'x' and 'x' is not used elsewhere in the string.
2.	Implement a program to convert infix notation to prefix notation using stack.
3.	Design a Singly Linked list which performs the following operations : <ul style="list-style-type: none">• Node * Create()• void Display(node *)• int max(node *)• int length(node *)• int search(node *, int x) //to search x in the given list and to return its position. If it is not found, it will return position otherwise will return -1.• void replace(node *, int x, int y) //will search for x and will be replacing with y.• void sort(node *)• void reverse(node *)• node * Merge(node *, node *) // will merge two link list and create the third link list which is returned by the function.
4.	Convert Infix operators to postfix (Reverse Polish) form, and solve an arithmetic expression in postfix form which may contain arithmetic operators like +, -, /, *, %, (,).
5.	Write following function using Recursion <ul style="list-style-type: none">• To multiply two numbers• To find length of the string• To print string reverse• To solve Tower of Hanoi Problem• To print nth Fibonacci number• To add all elements of an array which is passed as argument to the function