Q) WAP to implement Singly Linked list with following operations :-

(i) Create linked list

(ii) Insertion of node at 1st position, at any position & at end of list.

(iii) Deletion of first element, specified element & last element in list.

(iv) Display contents of linked list.

Ans:

```
#include <stdio.h>
#include <stdlib.h>

struct Node { int data;
              struct Node *next;
            };

void push (struct Node ** head_ref, int new_data)
{ struct Node *new_node = (struct Node*)malloc(sizeof
                          (struct Node));
  new_node -> data = new_data;
  new_node -> next = (*head_ref);
  (*head_ref) = new_node;
}

void append (struct Node ** head_ref, int new_data)
{ struct Node *last = *head_ref;
  new_node -> data = new_data;
  new_node -> next = NULL;
  if (*head_ref = NULL)
  { *head_ref = new_node;
    return;
  }
  while (last -> next != NULL)
```

```
    last = last -> next;
    last -> next = new_node;
    return;
}

void printlist (struct Node *node)
{ while(node != NULL)
    { printf (" %d", node -> data);
      node = node -> next;
    }
}

int main ()
{ struct Node *head = NULL;
  append (&head, 6);
  push (&head, 7);
  push (&head, 1);
  append (&head, 4);
  printf(" created linked list is: ");
  printlist (head);
  return 0;
}
```

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