Logic Building Assignment : 30

Consider below code snippet to solve given problem statements.

```
#define TRUE 1
#define FALSE 0

typedef int BOOL;

struct node
{
   int Data;
   node *Next;
};

typedef struct node NODE;
typedef struct node* PNODE;
typedef struct node** PPNODE;

void InsertFirst(PPNODE Head , int no )
{
   PNODE newn = NULL;

   newn = (PNODE)malloc(sizeof(NODE));

   newn->Next = NULL;
   newn->Data = no;

   if (*Head == NULL)
   {
      *Head = newn;
   }
   else
   {
      newn -> Next = *Head;
      *Head = newn;
   }
}
int main()
{
      PNODE First = NULL;

      InsertFirst(&First, 101);
      InsertFirst(&First, 51);
      InsertFirst(&First, 21);
      InsertFirst(&First, 11);

      // Call all functions for below problem statements.

      return 0;
```

}

1. Write a program which displays all elements which are perfect from singly linear linked list.

Function Prototype :

int DisplayPerfect(PNODE Head);

Input linked list : |11|->|28|->|17|->|41|->|6|->|89|

Output : 6 28

2. Write a program which displays all elements which are prime from singly linear linked list.

Function Prototype :

int DisplayPrime(PNODE Head);

Input linked list : |11|->|20|->|17|->|41|->|22|->|89|

Output : 11 17 41 89

3. Write a program which returns addition of all even element from singly linear linked list.

Function Prototype :

int AdditionEven(PNODE Head);

Input linked list : |11|->|20|->|32|->|41|

Output : 52

4. Write a program which return second maximum element from singly linear linked list.

Function Prototype :

int SecMaximum(PNODE Head);

Input linked list : |110|->|230|->|320|->|240|

Output : 240

5. Write a program which display addition of digits of element from singly linear linked list.

Function Prototype :int SumDigit(PNODE Head);

Input linked list : |110|->|230|->|20|->|240|->|640|

Output : 2 5 2 6 10