**Assignment DAY-4**

**1)In the binary search algorithm, it is suggested to calculate the mid as beg+(end-beg)/2 instead of (beg+end)/2.Why?**

**Ans.** Pointer addition is not supported in C while pointer subtraction is supported.

Because beg+end may overflow. Which means we get a result that is less than left.

**2) write the algorithm/function for ternary search.**

int ternary\_search(int l,int r, int x)

{

if(r>=l)

{

int mid1 = l + (r-l)/3;

int mid2 = r - (r-l)/3;

if(ar[mid1] == x)

return mid1;

if(ar[mid2] == x)

return mid2;

if(x<ar[mid1])

return ternary\_search(l,mid1-1,x);

else if(x>ar[mid2])

return ternary\_search(mid2+1,r,x);

else

return ternary\_search(mid1+1,mid2-1,x);

}

return -1;

}