ASSIGNMENT 4

3 . In the Binary Search algorithm, it is suggested to calculate the mid as beg + (end - beg) / 2

instead of (beg + end) / 2. Why is it so?

**ANS :** beg+(end-beg)/2 is preferred because (beg+end)/2 may cause overflow when taking large integers. Beg+(end-beg)/2 doesn’t cause any overflow.

4 . TERNARY SEARCH

while(beg<=end)

{

mid1 = beg(end-beg)/3

mid2 = end(end-beg)/3

if(search == a[mid1])

{

return mid1

}

else if(search==a[mid2])

{

return mid2

}

else if(search<a[mid1])

{

end=mid1-1

}

else if(search>a[mid2])

{

beg = mid1+1

}

else

{

beg=mid1+1

end=mid2-1

}

}