ASSIGNMENT-1

By

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Ist

CSE(AI/ML)

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Q1 :- Write a C program to print Fibonacci series up to a given number of terms.

```
#include <stdio.h>
void main(){
   int i,n, t1=0, t2=1;
   int nextTerm= t1 + t2;
   printf("Enter number of terms:");
   scanf("%d",&n);
 printf("Fibonacci series: %d, %d,", t1, t2);
   for(i=3; i<=n; ++i){
      printf("%d,",nextTerm);
      t1= t2;
      t2= nextTerm;
      nextTerm= t1+t2;
   }
}
```

```
PS E:\c= Aman> cd "e:\c= Aman\" ; if ($?) { gcc Fibonacci.c -o Fibonacci } ; if ($?) { .\Fibonacci }
Enter number of terms:8
Fibonacci series: 0, 1,1,2,3,5,8,13,
PS E:\c= Aman>
```

Q2 :- There are three piles of stones. The first pile contains a stones, the second pile contains b stones and the third pile contains c stones. You must choose one of the piles and split the stones from it to the other two piles; specifically, if the chosen pile initially contained s stones, you should choose an integer k ($0 \le k \le s$), move k stones from the chosen pile onto one of the remaining two piles and $s-k$ stones onto the other remaining pile. Determine if it is possible for the two remaining piles (in any order) to contain x stones and y stones respectively after performing this action.

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

```
int main() {
    int t;
    printf("Enter the number of test cases: ");
    scanf("%d", &t);
    while (t--) {
        int a, b, c, x, y;
        printf("Enter a, b, c, x, y for test case (separated by space): ");
        scanf("%d %d %d %d %d", &a, &b, &c, &x, &y);
        if ((a + b + c == x + y) && (a >= x && b >= x || a >= y && c >= y || b >= x && c >= y)) {
            printf("Yes\n");
        } else {
            printf("No\n");
        }
    }
    return 0;
}
```

```
PS E:\c= Aman> cd "e:\c= Aman\" ; if ($?) { gcc Question2.c -o Question2 } ; if ($?) { .\Question2 }
Enter the number of test cases: 4
Enter a, b, c, x, y for test case (separated by space): 1 2 3 2 3
No
Enter a, b, c, x, y for test case (separated by space): 3 2 5 2 5
No
Enter a, b, c, x, y for test case (separated by space): 6 5 2 5 2
No
Enter a, b, c, x, y for test case (separated by space): 2 4 2 6 2
Yes
PS E:\c= Aman>
```