

Name:	Faizan
Reg No:	FA21-BSE-011
Section:	BSE-6B

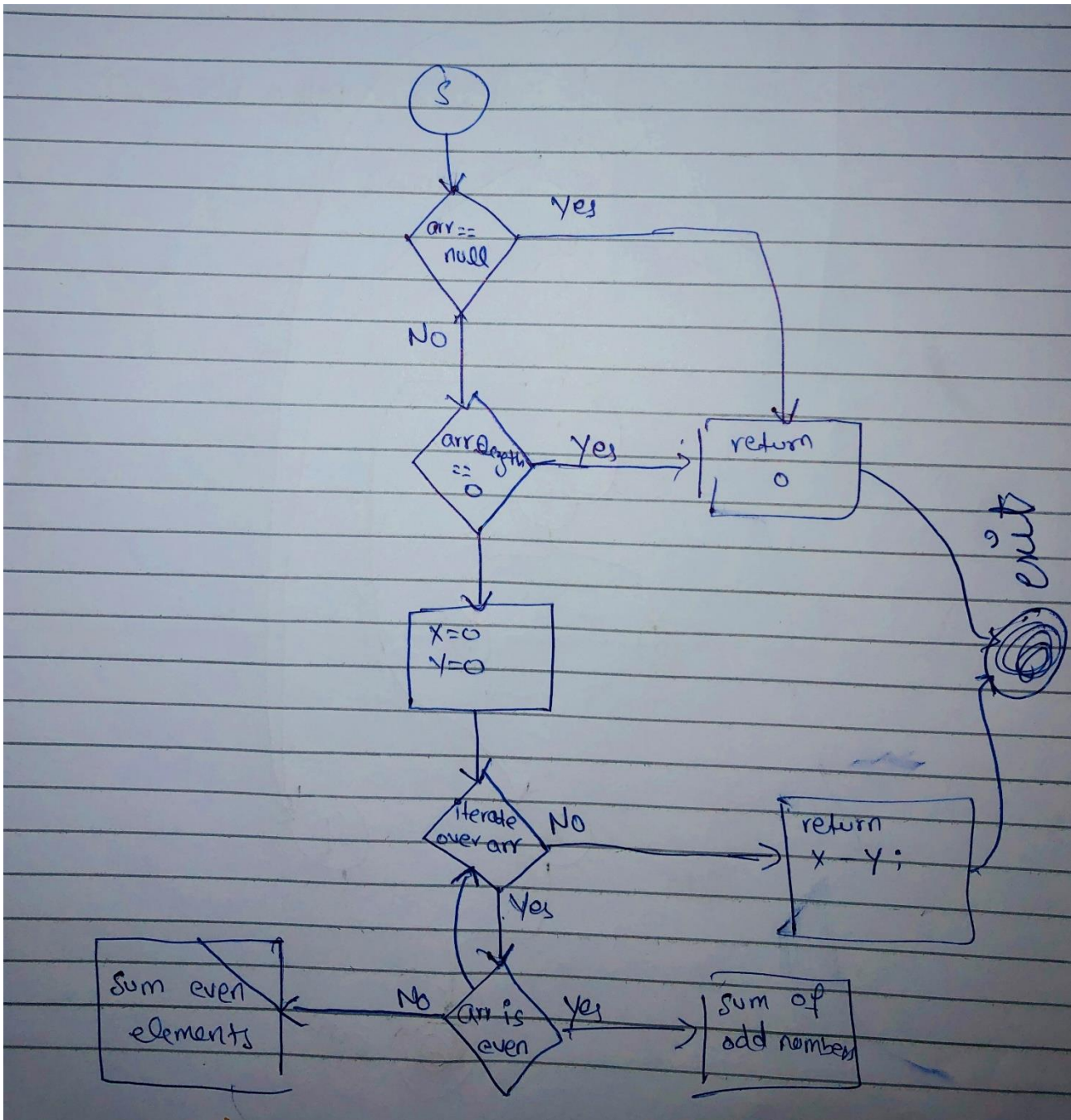
White Box Testing

Write a function that takes an array of integers as an argument and returns a value based on the sums of the even and odd numbers in the array. Let X = the sum of the odd numbers in the array and let Y = the sum of the even numbers. The function should return X – Y

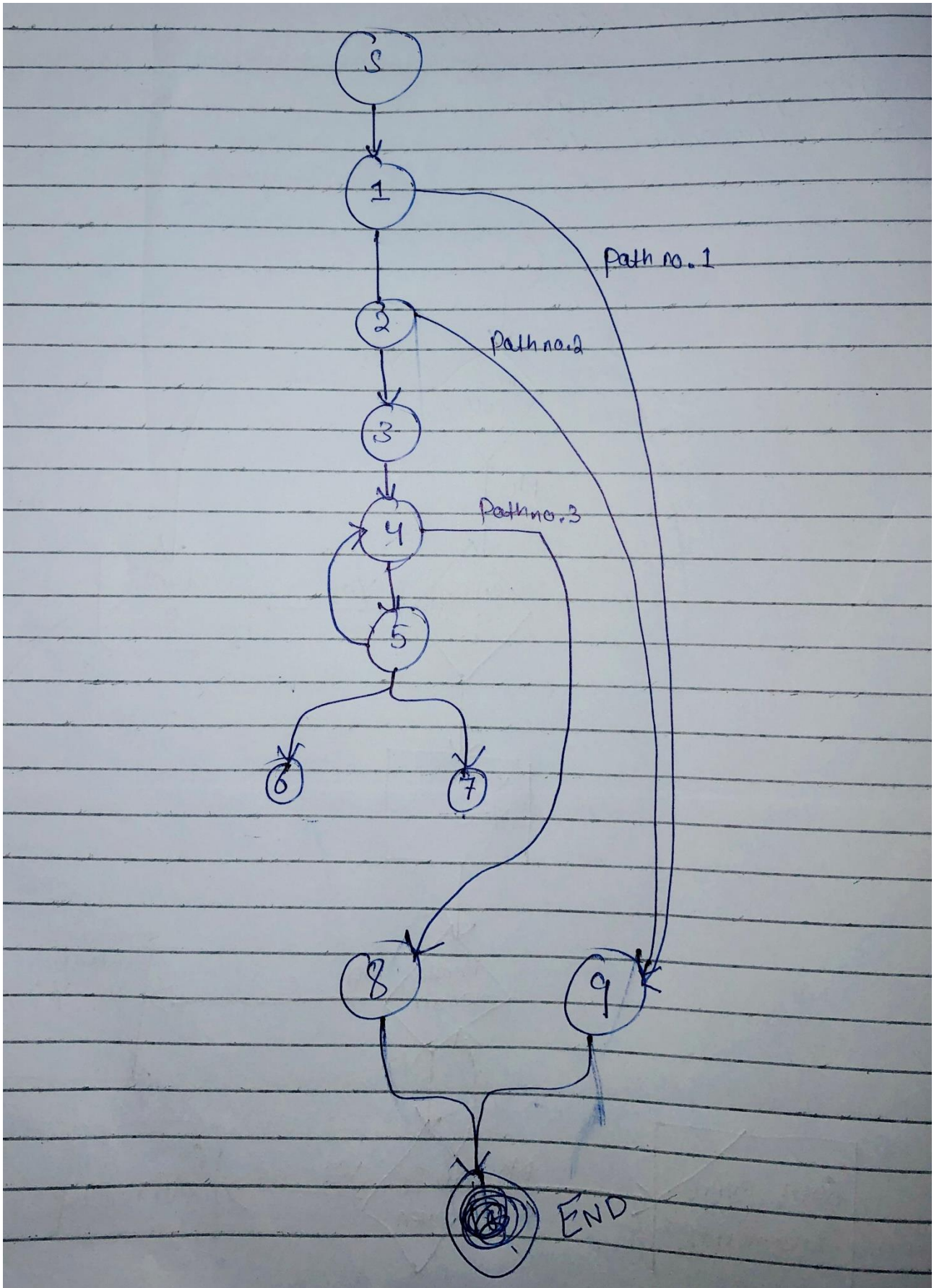
1. Program Unit:

```
public static int find(int[] arr){  
    if(arr==null||arr.length==0){  
        return 0;  
    }  
    int x=0,y=0;  
    for(int i=0;i<arr.length;i++){  
        if(arr[i]%2!=0){  
            x+=arr[i];  
        }else{  
            y+=arr[i];  
        }  
    }  
    return x-y;  
}
```

2. Control Flow Graph:



3. Identifying Execution instances (paths):



4. All Paths:

Execution Instances:-

Path No. 01 : (1) → (4) → (6)

Path No. 02 : (1) → (2) → (4) → (6)

Path No. 03 : (1) → (2) → (3) → (4) → (5) → (6)

5. Input Data:

Path No	Input Data	Expected Outcome
01	arr = Null	0
02	arr.length = 0	0
03	{1, 2, 3, 4}	-2

6. Test Cases:

Test Case No.	Description	Input	Expected Output	Actual Output	Status
1	Single odd number	{1}	1	1	Pass
2	One odd and one even number	{1, 2}	-1	-1	Pass
3	Three odd numbers	{1, 3, 5}	-9	-9	Pass
4	Three even numbers	{2, 4, 6}	-12	-12	Pass
5	One odd, one even, and one odd number	{1, 2, 3}	-4	-4	Pass
6	Two odd and one even number	{1, 3, 2}	2	2	Pass
7	Two even and one odd number	{2, 4, 1}	-5	-5	Pass
8	Two even, one odd, and one even number	{3, 2, 1, 4}	4	4	Pass
9	Two even, one odd, and one even number (reversed)	{6, 2, 1, 4}	-11	-11	Pass
10	Three odd numbers	{5, 7, 9}	-21	-21	Pass