



Experiment Title 4

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Subject Code: 20CSP-351

Subject Name: Competitive Coding-II

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1. **Aim:** To demonstrate the concept of Hashing problem 1: M
2. **Objective:** The objective is to solve problem of hashing and its methods and string pattern.

3. Code and output:

Problem 1: Missing Number

Code:

```
class Solution {  
    public int missingNumber(int[] nums) {  
        int n = nums.length,a = n;  
        for(int i=0;i<n;i++){  
            a^=i;  
            a^=nums[i];  
        }  
        return a;  
    }  
}
```

Output:



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Testcase	Result
• Case 1	• Case 2
• Case 3	
Input	
nums = [3,0,1]	
Output	
2	
Expected	
2	

Problem 2: Word Pattern

Code:

```
class Solution {
    public boolean wordPattern(String pattern, String s) {
        String words[] = s.split(" ");
        if(words.length!=pattern.length()){
            return false;
        }
        HashMap<Character, String> map = new HashMap<>();
        for(int i=0; i<pattern.length(); i++){
            char current_char = pattern.charAt(i);
            if(map.containsKey(current_char)){
                if(!map.get(current_char).equals(words[i])){
                    return false;
                }
            } else {
                if(map.containsValue(words[i])){
                    return false;
                }
                map.put(current_char, words[i]);
            }
        }
    }
}
```



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```
        return true;
    }
}
```

Output:

Testcase	Result
Accepted Runtime: 0 ms	
• Case 1 • Case 2 • Case 3	
Input	
pattern = "abba"	
s = "dog cat cat dog"	
Output	
true	