

# Java Developer Interview Prep - Cheat Sheet

## JAVA & OOP BASICS

### 1. Reverse a String:

```
String reversed = new StringBuilder(str).reverse().toString();
```

### 2. Prime Number Check:

```
boolean isPrime(int n) {  
    if (n <= 1) return false;  
    for (int i = 2; i <= Math.sqrt(n); i++) {  
        if (n % i == 0) return false;  
    }  
    return true;  
}
```

### 3. Factorial of a Number:

```
int factorial(int n) {  
    if (n == 0 || n == 1) return 1;  
    return n * factorial(n - 1);  
}
```

### 4. Palindrome Check:

```
boolean isPalindrome(String str) {  
    int i = 0, j = str.length() - 1;  
    while (i < j) {  
        if (str.charAt(i++) != str.charAt(j--)) return false;  
    }  
    return true;  
}
```

### 5. Swap Without Temp Variable:

```
a = a + b;
```

```
b = a - b;
```

```
a = a - b;
```

## ARRAY & LOOP QUESTIONS

### 6. Second Largest in Array:

```
int first = Integer.MIN_VALUE, second = Integer.MIN_VALUE;
for (int num : arr) {
    if (num > first) {
        second = first;
        first = num;
    } else if (num > second && num != first) {
        second = num;
    }
}
```

### 7. Fibonacci Series:

```
int a = 0, b = 1;
for (int i = 0; i < n; i++) {
    System.out.print(a + " ");
    int temp = a + b;
    a = b;
    b = temp;
}
```

### 8. Remove Duplicates (Using Set):

```
Set<Integer> set = new HashSet<>();
for (int num : arr) {
    set.add(num);
}
```

## STRING & CHARACTER QUESTIONS

#### 9. Character Count:

```
Map<Character, Integer> map = new HashMap<>();  
for (char c : str.toCharArray()) {  
    map.put(c, map.getOrDefault(c, 0) + 1);  
}
```

#### 10. Remove Vowels:

```
str = str.replaceAll("[aeiouAEIOU]", "");
```

### FRAMEWORK & CONCEPTS

#### - REST API Example:

```
@RestController  
  
public class HelloController {  
    @GetMapping("/hello")  
    public String sayHello() {  
        return "Hello World";  
    }  
}
```

#### - Spring vs Spring Boot: Spring Boot has embedded server & auto-config.

#### - Git: 'git pull' = fetch + merge; 'git fetch' = only download

#### - OOP: Encapsulation, Abstraction, Inheritance, Polymorphism

You're ready! Practice logic and be confident. Good luck!