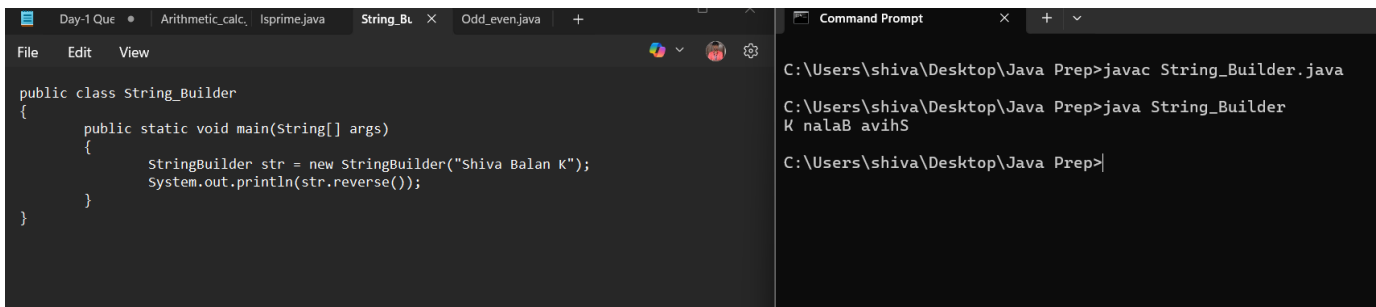


1. write a java program to reverse a string using string builder

```
public class String_Builder
{
    public static void main(String[] args)
    {
        StringBuilder str = new StringBuilder("Shiva Balan K");
        System.out.println(str.reverse());
    }
}
```



2. write a java program to find whether given number is prime or not

```
import java.util.Scanner;

public class Isprime {

    public static boolean prime(int num) {
        if (num <= 1) {
            return false;
        }
        for (int i = 2; i * i <= num; i++) {
            if (num % i == 0) {
                return false;
            }
        }
        return true;
    }

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
```

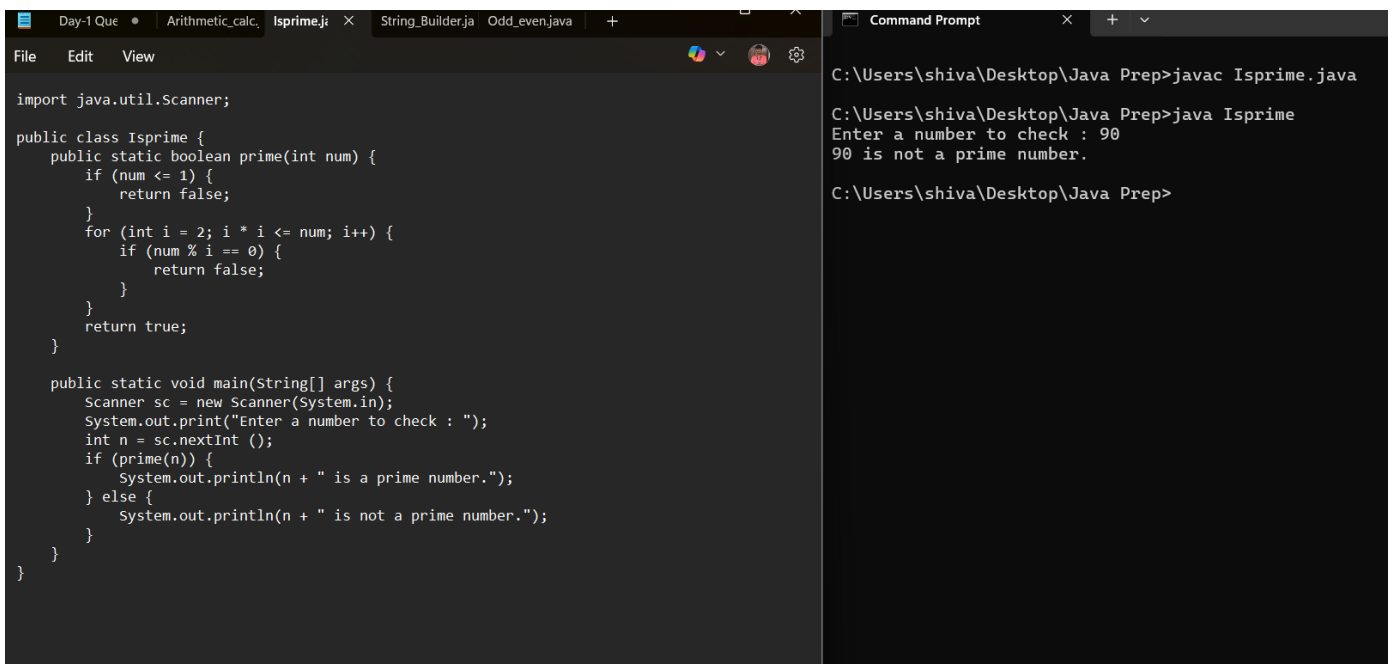
```

System.out.print("Enter a number to check : ");

int n = sc.nextInt ();

    if (prime(n)) {
        System.out.println(n + " is a prime number.");
    } else {
        System.out.println(n + " is not a prime number.");
    }
}
}

```



The screenshot shows an IDE window with the following Java code for a prime checker:

```

import java.util.Scanner;

public class Isprime {
    public static boolean prime(int num) {
        if (num <= 1) {
            return false;
        }
        for (int i = 2; i * i <= num; i++) {
            if (num % i == 0) {
                return false;
            }
        }
        return true;
    }

    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter a number to check : ");
        int n = sc.nextInt ();
        if (prime(n)) {
            System.out.println(n + " is a prime number.");
        } else {
            System.out.println(n + " is not a prime number.");
        }
    }
}

```

The Command Prompt shows the following execution steps:

```

C:\Users\shiva\Desktop\Java Prep>javac Isprime.java
C:\Users\shiva\Desktop\Java Prep>java Isprime
Enter a number to check : 90
90 is not a prime number.
C:\Users\shiva\Desktop\Java Prep>

```

3. write a java program to perform arithmetic calculator,

```

import java.util.Scanner;

public class Arithmetic_calc {

    public static void main(String[] args) {

        Scanner sc = new Scanner(System.in);

        System.out.print("Enter the first number: ");

        int a = sc.nextInt();

        System.out.print("Enter the second number: ");

```

```
int b = sc.nextInt();

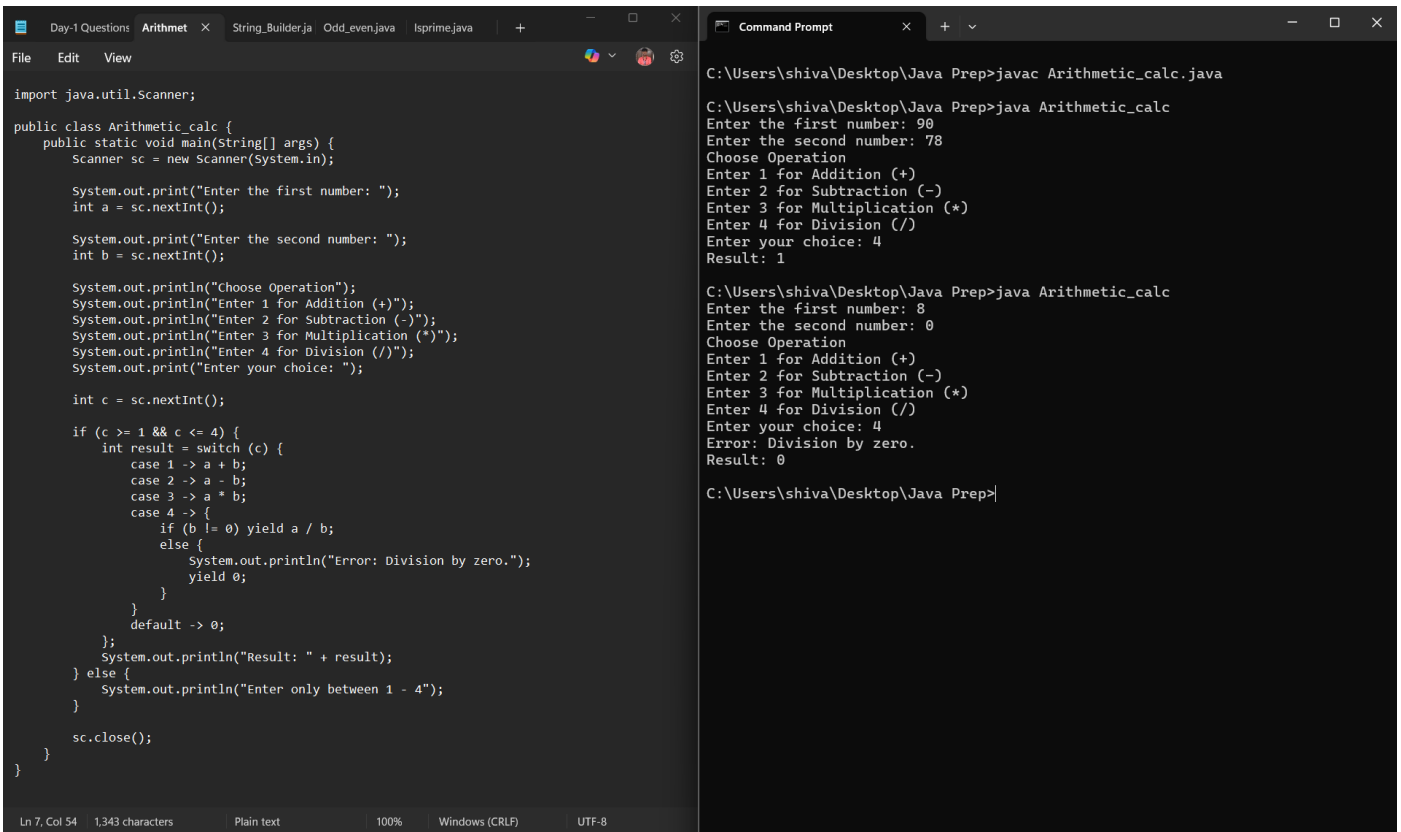
System.out.println("Choose Operation");
System.out.println("Enter 1 for Addition (+)");
System.out.println("Enter 2 for Subtraction (-)");
System.out.println("Enter 3 for Multiplication (*)");
System.out.println("Enter 4 for Division (/)");
System.out.print("Enter your choice: ");

int c = sc.nextInt();

if (c >= 1 && c <= 4) {
    int result = switch (c) {
        case 1 -> a + b;
        case 2 -> a - b;
        case 3 -> a * b;
        case 4 -> {
            if (b != 0) yield a / b;
            else {
                System.out.println("Error: Division by zero.");
                yield 0;
            }
        }
        default -> 0;
    };
    System.out.println("Result: " + result);
} else {
    System.out.println("Enter only between 1 - 4");
}

sc.close();
}
```

}



The screenshot shows a code editor on the left and a Command Prompt on the right. The code editor contains a Java program named `Arithmetic_calc.java` that takes two numbers and an operation as input and performs the corresponding arithmetic operation. The Command Prompt shows the compilation and execution of this program. In the first run, the user enters 90 and 78, chooses addition, and the result is 167. In the second run, the user enters 8 and 0, chooses addition, and the result is 8. In the third run, the user enters 8 and 0, chooses division, and an error message "Error: Division by zero." is displayed.

```
import java.util.Scanner;

public class Arithmetic_calc {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);

        System.out.print("Enter the first number: ");
        int a = sc.nextInt();

        System.out.print("Enter the second number: ");
        int b = sc.nextInt();

        System.out.println("Choose Operation");
        System.out.println("Enter 1 for Addition (+)");
        System.out.println("Enter 2 for Subtraction (-)");
        System.out.println("Enter 3 for Multiplication (*)");
        System.out.println("Enter 4 for Division (/)");
        System.out.print("Enter your choice: ");

        int c = sc.nextInt();

        if (c >= 1 && c <= 4) {
            int result = switch (c) {
                case 1 -> a + b;
                case 2 -> a - b;
                case 3 -> a * b;
                case 4 -> {
                    if (b != 0) yield a / b;
                    else {
                        System.out.println("Error: Division by zero.");
                        yield 0;
                    }
                }
                default -> 0;
            };
            System.out.println("Result: " + result);
        } else {
            System.out.println("Enter only between 1 - 4");
        }

        sc.close();
    }
}
```

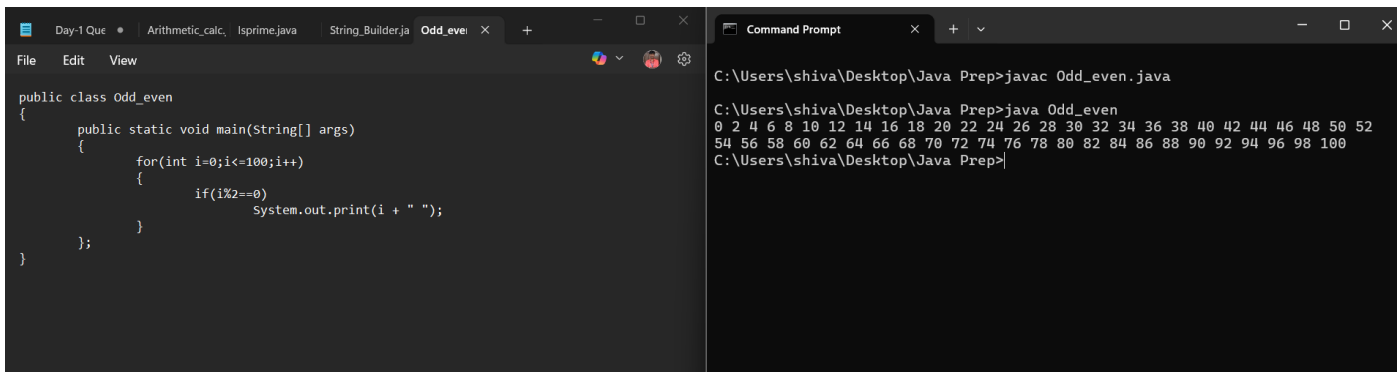
```
C:\Users\shiva\Desktop\Java Prep>javac Arithmetic_calc.java
C:\Users\shiva\Desktop\Java Prep>java Arithmetic_calc
Enter the first number: 90
Enter the second number: 78
Choose Operation
Enter 1 for Addition (+)
Enter 2 for Subtraction (-)
Enter 3 for Multiplication (*)
Enter 4 for Division (/)
Enter your choice: 4
Result: 1

C:\Users\shiva\Desktop\Java Prep>java Arithmetic_calc
Enter the first number: 8
Enter the second number: 0
Choose Operation
Enter 1 for Addition (+)
Enter 2 for Subtraction (-)
Enter 3 for Multiplication (*)
Enter 4 for Division (/)
Enter your choice: 4
Error: Division by zero.
Result: 0

C:\Users\shiva\Desktop\Java Prep>
```

4. write a java program to print even numbers 1-100,

```
public class Odd_even
{
    public static void main(String[] args)
    {
        for(int i=0;i<=100;i++)
        {
            if(i%2==0)
                System.out.print(i + " ");
        }
    }
}
```



The screenshot shows a code editor on the left with a Java program named `Odd_even.java`. The program defines a class `Odd_even` with a `main` method that iterates from 0 to 100 and prints even numbers. On the right, a Command Prompt window shows the compilation and execution of the program, resulting in the output of even numbers from 0 to 100.

```
public class Odd_even
{
    public static void main(String[] args)
    {
        for(int i=0;i<=100;i++)
        {
            if(i%2==0)
                System.out.print(i + " ");
        }
    }
}

C:\Users\shiva\Desktop\Java Prep>javac Odd_even.java
C:\Users\shiva\Desktop\Java Prep>java Odd_even
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52
54 56 58 60 62 64 66 68 70 72 74 76 78 80 82 84 86 88 90 92 94 96 98 100
C:\Users\shiva\Desktop\Java Prep>
```

5. write a java program to perform bank transaction - creation of account, transaction.

```
import java.util.*;
```

```
public class Banking {

    static class Account {

        String accno;

        String accname;

        double balance;

        public Account(String accno, String accname, double balance) {

            this.accno = accno;

            this.accname = accname;

            this.balance = balance;

        }

        public void deposit(double amount) {

            if (amount > 0) {

                balance += amount;

                System.out.println("Deposited Rs." + amount);

                System.out.println("Current Balance: Rs." + balance);

            } else {

                System.out.println("Deposit Failed. Amount must be positive.");

            }

        }

    }

}
```

```

public void withdraw(double amt) {
    if (amt > 0 && balance >= amt) {
        balance -= amt;
        System.out.println("Withdrawal of Rs." + amt + " success.");
        System.out.println("Current Balance: " + balance);
    } else if (amt <= 0) {
        System.out.println("Enter only positive values.");
    } else {
        System.out.println("Insufficient Balance.");
    }
}

```

```

public double getBal() {
    return balance;
}

```

```

public String getAccinfo() {
    return "Account Number: " + accno + ", Account Holder Name: " +
accname + ", Balance: " + balance;
}

```

```

public String getAccno() {
    return accno;
}
}

```

```

static class Bank {
    public List<Account> accounts;

    public Bank() {
        this.accounts = new ArrayList<>();
    }
}

```

```
}
```

```
public void addAccount(Account account) {  
    accounts.add(account);  
    System.out.println("Account Created Successfully");  
}
```

```
public Account findAccount(String accno) {  
    for (Account account : accounts) {  
        if (account.getAccno().equals(accno)) {  
            return account;  
        }  
    }  
    return null;  
}  
}
```

```
public static void main(String[] args) {  
    Scanner sc = new Scanner(System.in);  
    Bank bank = new Bank();  
    int choice;  
  
    do {  
        System.out.println("\n===== Bank ===== \n 1. Create Account \n 2.  
Deposit \n 3. Withdraw \n 4. View Account \n 5. Exit \n Enter your Choice : ");  
        choice = sc.nextInt();  
        sc.nextLine();  
  
        switch (choice) {  
            case 1:  
                System.out.print("Enter Account Number: ");  
                String accNo = sc.nextLine();
```

```
System.out.print("Enter Account Holder Name: ");
String accName = sc.nextLine();
System.out.print("Enter Initial Balance: ");
double initBal = sc.nextDouble();
sc.nextLine();
Account acc = new Account(accNo, accName, initBal);
bank.addAccount(acc);
break;
```

case 2:

```
System.out.print("Enter Account Number: ");
String depAccNo = sc.nextLine();
Account depAcc = bank.findAccount(depAccNo);
if (depAcc != null) {
    System.out.print("Enter amount to deposit: ");
    double amount = sc.nextDouble();
    sc.nextLine();
    depAcc.deposit(amount);
} else {
    System.out.println("Account not found.");
}
break;
```

case 3:

```
System.out.print("Enter Account Number: ");
String withAccNo = sc.nextLine();
Account withdrawAcc = bank.findAccount(withAccNo);
if (withdrawAcc != null) {
    System.out.print("Enter amount to withdraw: ");
    double amt = sc.nextDouble();
    sc.nextLine();
    withdrawAcc.withdraw(amt);
}
```



```
    } else {  
        System.out.println("Account not found.");  
    }  
    break;
```

case 4:

```
    System.out.print("Enter Account Number: ");  
    String infoAccNo = sc.nextLine();  
    Account infoAcc = bank.findAccount(infoAccNo);  
    if (infoAcc != null) {  
        System.out.println("Account Found!");  
        System.out.println(infoAcc.getAccinfo());  
    } else {  
        System.out.println("Account not found.");  
    }  
    break;
```

case 5:

```
    System.out.println("*** Thanking you! ***");  
    break;
```

default:

```
    System.out.println("Enter a valid option only ...");
```

```
}
```

```
} while (choice != 5);
```

```
sc.close();
```

```
}
```

```
}
```

```
Command Prompt - java Ban x + v
C:\Users\shiva\Desktop\Java Prep>javac Banking.java
C:\Users\shiva\Desktop\Java Prep>java Banking

===== Bank =====
1. Create Account
2. Deposit
3. Withdraw
4. View Account
5. Exit
Enter your Choice :
1
Enter Account Number: 123
Enter Account Holder Name: Shiva
Enter Initial Balance: 85000
Account Created Successfully

===== Bank =====
1. Create Account
2. Deposit
3. Withdraw
4. View Account
5. Exit
Enter your Choice :
2
Enter Account Number: 123
Enter amount to deposit: 12000
Deposited Rs.12000.0
Current Balance: Rs.97000.0

===== Bank =====
1. Create Account
2. Deposit
3. Withdraw
4. View Account
5. Exit
Enter your Choice :
3
Enter Account Number: 123
Enter amount to withdraw: 34500
Withdrawal of Rs.34500.0 success.
Current Balance: 62500.0

===== Bank =====
1. Create Account
2. Deposit
3. Withdraw
4. View Account
5. Exit
Enter your Choice :
```

```
File Edit View
}

public static void main(String[] args) {
    Scanner sc = new Scanner(System.in);
    Bank bank = new Bank();
    int choice;

    do {
        System.out.println("\n===== Bank ===== \n 1. Create Account \n 2. Deposit \n
3. Withdraw \n 4. View Account \n 5. Exit \n Enter your Choice : ");
        choice = sc.nextInt();
        sc.nextLine();

        switch (choice) {
            case 1:
                System.out.print("Enter Account Number: ");
                String accNo = sc.nextLine();
                System.out.print("Enter Account Holder Name: ");
                String accName = sc.nextLine();
                System.out.print("Enter Initial Balance: ");
                double initBal = sc.nextDouble();
                sc.nextLine();
                Account acc = new Account(accNo, accName, initBal);
                bank.addAccount(acc);
                break;

            case 2:
                System.out.print("Enter Account Number: ");
                String depAccNo = sc.nextLine();
                Account depAcc = bank.findAccount(depAccNo);
                if (depAcc != null) {
                    System.out.print("Enter amount to deposit: ");
                    double amount = sc.nextDouble();
                    sc.nextLine();
                    depAcc.deposit(amount);
                } else {
                    System.out.println("Account not found.");
                }
                break;

            case 3:
                System.out.print("Enter Account Number: ");
                String withAccNo = sc.nextLine();
                Account withdrawAcc = bank.findAccount(withAccNo);
                if (withdrawAcc != null) {
```

Output

===== Bank =====

1. Create Account
2. Deposit
3. Withdraw
4. View Account
5. Exit

Enter your Choice :

1

Enter Account Number: 123

Enter Account Holder Name: Shiva

Enter Initial Balance: 85000

Account Created Successfully

===== Bank =====

1. Create Account
2. Deposit
3. Withdraw
4. View Account

5. Exit

Enter your Choice :

2

Enter Account Number: 123

Enter amount to deposit: 12000

Deposited Rs.12000.0

Current Balance: Rs.97000.0

===== Bank =====

1. Create Account

2. Deposit

3. Withdraw

4. View Account

5. Exit

Enter your Choice :

3

Enter Account Number: 123

Enter amount to withdraw: 34500

Withdrawal of Rs.34500.0 success.

Current Balance: 62500.0

===== Bank =====

1. Create Account

2. Deposit

3. Withdraw

4. View Account

5. Exit

Enter your Choice :

4

Enter Account Number: 123

Account Found!

Account Number: 123, Account Holder Name: Shiva, Balance: 62500.0

===== Bank =====

1. Create Account
2. Deposit
3. Withdraw
4. View Account
5. Exit

Enter your Choice :

1

Enter Account Number: 345

Enter Account Holder Name: balan

Enter Initial Balance: 30908

Account Created Successfully

===== Bank =====

1. Create Account
2. Deposit
3. Withdraw
4. View Account
5. Exit

Enter your Choice :

2

Enter Account Number: 809

Account not found.

===== Bank =====

1. Create Account
2. Deposit
3. Withdraw
4. View Account
5. Exit

Enter your Choice :

5

*** Thanking you! ***