

# PRACTICAL 6(D) – JSP LOAN CALCULATOR

## AIM

To design and develop a Loan Calculator using JSP which accepts Principal Amount and Time Period (in years) and calculates loan details based on the following interest slabs:

- 1 to 7 years at 5.35%
- 8 to 15 years at 5.50%
- 16 to 30 years at 5.75%

## SOFTWARE REQUIREMENTS

- Operating System: Windows / Linux
- JDK: Version 7 or 8
- NetBeans IDE 7.x
- Apache Tomcat Server 7.x

## THEORY

A Loan Calculator is a financial application used to calculate the monthly payment, total interest, and remaining loan balance over a given time period. JSP is used to handle user input and perform server-side calculations dynamically based on interest slabs.

## FORMULA USED

Simple Interest Formula:  $\text{Interest} = (\text{Principal} \times \text{Rate} \times \text{Time}) / 100$   
Total Amount = Principal +  
Interest Monthly Payment = Total Amount / (Time × 12)

## SOURCE CODE – loan.jsp (Input Form)

```
<html>
<body>
<h2>Loan Calculator</h2>
<form action="calculate.jsp" method="post">
Principal Amount: <input type="text" name="principal"><br><br>
Time Period (Years): <input type="text" name="years"><br><br>
<input type="submit" value="Calculate Loan">
</form>
</body>
</html>
```

## SOURCE CODE – calculate.jsp (Calculation Logic)

```
<%
double principal = Double.parseDouble(request.getParameter("principal"));
int years = Integer.parseInt(request.getParameter("years"));
double rate = 0;

if (years >= 1 && years <= 7) {
    rate = 5.35;
} else if (years >= 8 && years <= 15) {
    rate = 5.50;
}
```

```

} else if (years >= 16 && years <= 30) {
    rate = 5.75;
}

double interest = (principal * rate * years) / 100;
double totalAmount = principal + interest;
double monthlyPayment = totalAmount / (years * 12);
%>

<html>
<body>
<h2>Loan Details</h2>
Principal Amount: <%= principal %><br>
Time Period: <%= years %> years<br>
Interest Rate: <%= rate %> %<br>
Total Interest: <%= interest %><br>
Total Amount Payable: <%= totalAmount %><br>
Monthly Payment: <%= monthlyPayment %><br>
</body>
</html>

```

## NETBEANS 7 – DETAILED EXECUTION STEPS

1. Open NetBeans IDE 7
2. File → New Project → Java Web → Web Application
3. Project Name: LoanCalculatorApp
4. Select Apache Tomcat Server
5. Click Finish
6. Right-click Web Pages → New → JSP
7. Create loan.jsp and calculate.jsp
8. Paste respective code
9. Right-click project → Run
10. Enter loan details and view calculation

## OUTPUT

The application displays loan interest rate, total interest, total payable amount, and monthly installment based on selected time period.

## RESULT

Thus, Loan Calculator using JSP with different interest slabs was successfully implemented.