# TP: Simulateur de Crédit

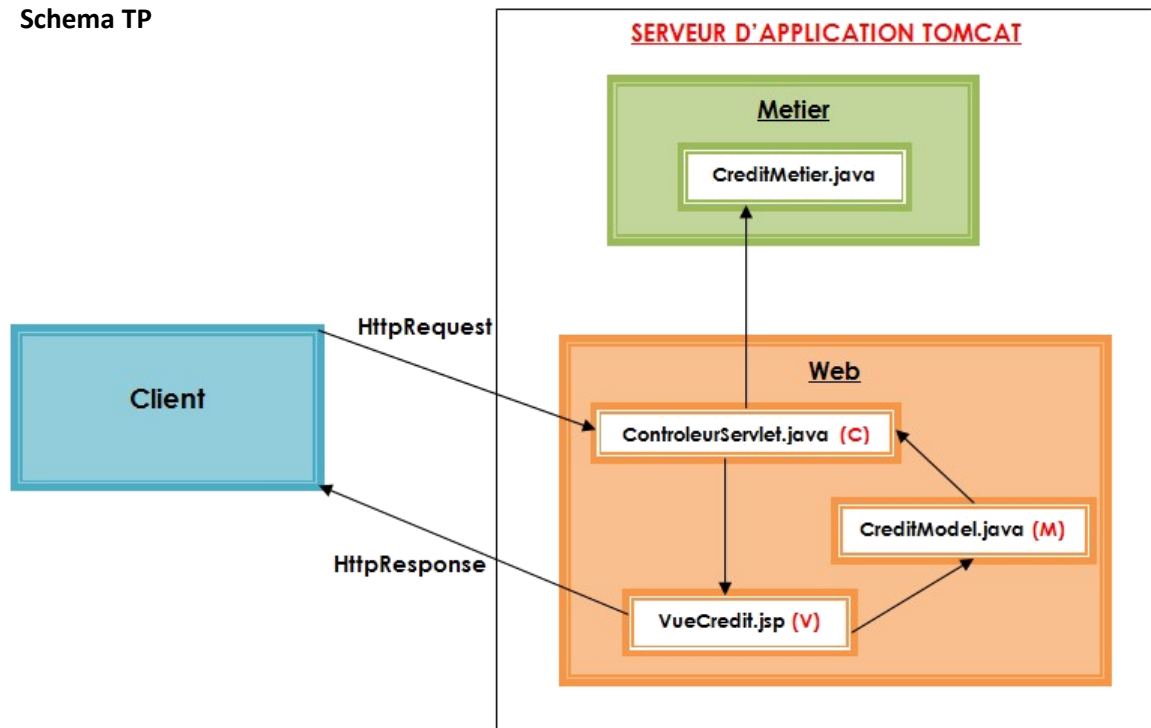## JEE, MVC, Servlet, JSP

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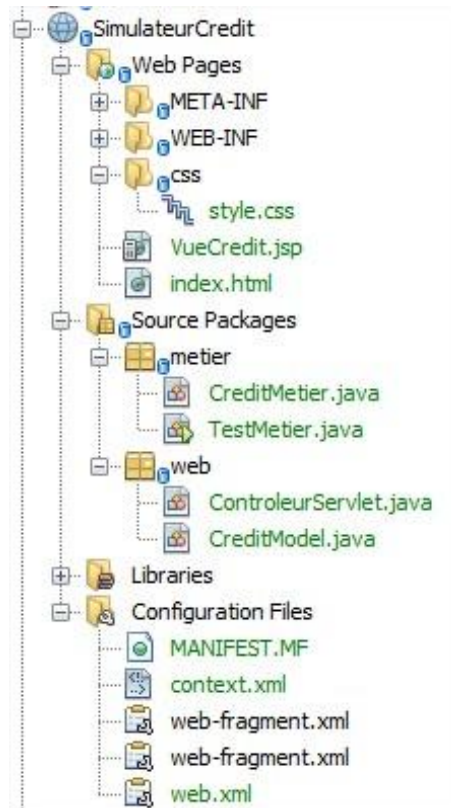
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# Structure

- **Schema TP**



- **IDE : Netbeans - Architecture**

# Implémentation

**1.Couche Metier**

- **Classe CreditMetier.java**

```java
package metier;

/**
 *
 * @author Ayoub MOUSTAID
 */
public class CreditMetier {
    public double calculeMensualite(double c,int duree,double taux)
    {
    double tauxExact=taux/100;
    double a=c*tauxExact/12;
    double b=1-Math.pow(1+tauxExact/12, -1*duree);
    return a/b;
    }
}
```

**2. Couche Web**

- **Classe ControleurServlet.java**

```java
package web;
/**
 *
 * @author Ayoub MOUSTAID
 */
@WebServlet(name = "cs", urlPatterns = {"/controleur"})
public class ControleurServlet extends HttpServlet {

    private CreditMetier metier;
```

```java
    @Override
    public void init() throws ServletException {
        metier = new CreditMetier();
    }

    @Override
    protected void doPost(HttpServletRequest req, HttpServletResponse resp) throws
ServletException, IOException {
        double montant = Double.parseDouble(req.getParameter("montant"));
        int duree = Integer.parseInt(req.getParameter("duree"));
        double taux = Double.parseDouble(req.getParameter("taux"));
        CreditModel creditModel = new CreditModel();
        creditModel.setMontant(montant);
        creditModel.setDuree(duree);
        creditModel.setTaux(taux);

        double result = metier.calculeMensualite(montant, duree, taux);

        creditModel.setMensualite(result);
        req.setAttribute("creditModel", creditModel);
        req.getRequestDispatcher("VueCredit.jsp").forward(req, resp);
    }

    @Override
    protected void doGet(HttpServletRequest req, HttpServletResponse resp) throws
ServletException, IOException {
        req.setAttribute("creditModel", new CreditModel());
        req.getRequestDispatcher("VueCredit.jsp").forward(req, resp);
    }

}
```

- **Classe CreditModel.java**

```java
package web;

/**
 *
 * @author Ayoub MOUSTAID
 */
public class CreditModel {
  private double montant;
  private int duree;
  private double taux;
  private double mensualite;

  public CreditModel() {
  }


  public CreditModel(double montant, int duree, double taux, double mensualite) {
    this.montant = montant;
    this.duree = duree;
    this.taux = taux;
    this.mensualite = mensualite;
  }

  public double getMontant() {
    return montant;
  }

  public void setMontant(double montant) {
    this.montant = montant;
  }

  public int getDuree() {
    return duree;
  }
```

```java
   public void setDuree(int duree) {
      this.duree = duree;
   }

   public double getTaux() {
      return taux;
   }

   public void setTaux(double taux) {
      this.taux = taux;
   }

   public double getMensualite() {
      return mensualite;
   }

   public void setMensualite(double mensualite) {
      this.mensualite = mensualite;
   }
}
```

- **Page VueCredit.jsp**

```jsp
<%--
   Document   : VueCredit
   Created on : Apr 22, 2016, 11:55:21 AM
   Author     : Ayoub MOUSTAID
--%>
<%@page import="web.CreditModel"%>
<%
   CreditModel creditModel = (CreditModel) request.getAttribute("creditModel");
%>
<!DOCTYPE html>
<html>
   <head>
      <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
      <title>Simulateur de Crédit</title>
```

```html
    <link rel="Stylesheet" type="text/css"
href="<%=request.getContextPath()%>/css/style.css"/>
  </head>
  <body>
    <div>
      <form action="controleur" method="post">
        <table>
          <tr>
            <td>Montant :</td>
            <td><input type="text" name="montant"
value="<%=creditModel.getMontant()%>"/></td>
            <td>DH</td>
          </tr>
          <tr>
            <td>Durée :</td>
            <td><input type="text" name="duree"
value="<%=creditModel.getDuree()%>"/></td>
            <td>Mois</td>
          </tr>
          <tr>
            <td>Taux :</td>
            <td><input type="text" name="taux"
value="<%=creditModel.getTaux()%>"/></td>
            <td>%</td>
          </tr>
          <tr>
            <td><input type="submit" value="calculer"/></td>
          </tr>
        </table>
      </form>

    </div>
    <div>
      <table>
        <tr>
          <td>Mensualité : </td>
          <td><%=creditModel.getMensualite()%></td>
          <td>DH</td>
```

```
        </tr>
      </table>
    </div>
  </body>
</html>
```

- **Feuille de style style.css**

```css
/*
   Created on : Apr 28, 2016, 6:47:50 PM
   Author     : Ayoub MOUSTAID
*/
div{
   border:1px solid gray;
   margin:10px;
   padding:10px;
}
```

- **Fichier descripteur de déploiement du contrôleur  web.xml**

```xml
<?xml version="1.0" encoding="UTF-8"?>

<web-app xmlns="http://xmlns.jcp.org/xml/ns/javaee"
         xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
         xsi:schemaLocation="http://xmlns.jcp.org/xml/ns/javaee
http://xmlns.jcp.org/xml/ns/javaee/web-app_3_1.xsd"
         version="3.1">
<display-name>SimulateurCredit</display-name>
  <servlet>
    <servlet-name>cs</servlet-name>
    <servlet-class>web.ControleurServlet</servlet-class>
  </servlet>
  <servlet-mapping>
      <servlet-name>cs</servlet-name>
      <url-pattern>/controleur</url-pattern>
  </servlet-mapping>
</web-app>
```

# Testes



localhost:8084/SimulateurCredit/controleur

Montant : 10000.0 DH

Durée : 10 Mois

Taux : 5.0 %

calculer

Mensualité : 1023.0595941059316 DH