**index.html:**

<!DOCTYPE html>

<html style='margin: *0*; padding: *0*; box-sizing: *border-box*;'>

<head>

<meta charset=*"ISO-8859-1"*>

<title>Validate Pan</title>

</head>

<body style='height: *100vh*; display: *flex*; flex-direction: *column*; align-items: *center*; padding: *2rem*;'>

<h1>Validate Pan</h1>

<form action=*"Register"* method=*"post"*>

<div style="margin-bottom: *1rem*;">

<label for=*"pan"*>Pan No.</label>

<input type=*"text"* name=*"pan"* id=*"pan"* />

</div>

<input type=*"submit"* value=*"Validate"* />

</form>

</body>

</html>

**Register.java:**

**import** java.io.IOException;

**import** java.io.PrintWriter;

**import** javax.servlet.ServletException;

**import** javax.servlet.annotation.WebServlet;

**import** javax.servlet.http.HttpServlet;

**import** javax.servlet.http.HttpServletRequest;

**import** javax.servlet.http.HttpServletResponse;

/\*\*

\* Servlet implementation class Register

\*/

@WebServlet("/Register")

**public** **class** Register **extends** HttpServlet {

**private** **static** **final** **long** ***serialVersionUID*** = 1L;

/\*\*

\* **@see** HttpServlet#HttpServlet()

\*/

**public** Register() {

**super**();

// **TODO** Auto-generated constructor stub

}

/\*\*

\* **@see** HttpServlet#service(HttpServletRequest request, HttpServletResponse response)

\*/

**protected** **void** service(HttpServletRequest request, HttpServletResponse response) **throws** ServletException, IOException {

**try** {

response.setContentType("text/html");

PrintWriter out = response.getWriter();

String pan = (String)request.getAttribute("pan");

out.println("<b style='color: green;'>Pan number "+pan+" is validated successfully.</b>");

} **catch** (Exception e) {

e.printStackTrace();

}

}

}

**RegisterFilter.java:**

**import** java.io.IOException;

**import** java.io.PrintWriter;

**import** javax.servlet.Filter;

**import** javax.servlet.FilterChain;

**import** javax.servlet.FilterConfig;

**import** javax.servlet.RequestDispatcher;

**import** javax.servlet.ServletException;

**import** javax.servlet.ServletRequest;

**import** javax.servlet.ServletResponse;

**import** javax.servlet.annotation.WebFilter;

**import** javax.servlet.http.HttpFilter;

/\*\*

\* Servlet Filter implementation class RegisterFilter

\*/

@WebFilter(servletNames = { "Register" })

**public** **class** RegisterFilter **extends** HttpFilter **implements** Filter {

/\*\*

\* **@see** HttpFilter#HttpFilter()

\*/

**public** RegisterFilter() {

**super**();

// **TODO** Auto-generated constructor stub

}

/\*\*

\* **@see** Filter#destroy()

\*/

**public** **void** destroy() {

// **TODO** Auto-generated method stub

}

/\*\*

\* **@see** Filter#doFilter(ServletRequest, ServletResponse, FilterChain)

\*/

**public** **void** doFilter(ServletRequest request, ServletResponse response, FilterChain chain) **throws** IOException, ServletException {

response.setContentType("text/html");

PrintWriter out = response.getWriter();

RequestDispatcher rd = request.getRequestDispatcher("index.html");

String pan = request.getParameter("pan");

**if**(pan == **null** || !pan.matches("[A-Z]{5}[0-9]{4}[A-Z]{1}")) {

rd.include(request, response);

out.println("<b style='color: red;'>Invalid Pan</b>");

}

**else** {

request.setAttribute("pan", pan);

chain.doFilter(request, response);

}

}

/\*\*

\* **@see** Filter#init(FilterConfig)

\*/

**public** **void** init(FilterConfig fConfig) **throws** ServletException {

// **TODO** Auto-generated method stub

}

}