Package controller;

Import jakarta.servlet.RequestDispatcher;

Import jakarta.servlet.ServletException;

Import jakarta.servlet.annotation.WebServlet;

Import jakarta.servlet.http.HttpServlet;

Import jakarta.servlet.http.HttpServletRequest;

Import jakarta.servlet.http.HttpServletResponse;

Import jakarta.servlet.http.HttpSession;

Import model.Question;

Import model.Quiz;

Import model.Result;

Import dao.QuizDAO;

Import java.io.IOException;

Import java.util.List;

@WebServlet(“/”)

Public class QuizServlet extends HttpServlet {

Private static final long serialVersionUID = 1L;

Private QuizDAO quizDAO;

Public void init() {

quizDAO = new QuizDAO();

}

Protected void doGet(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {

String action = request.getServletPath();

Try {

Switch (action) {

Case “/newQuiz”:

showNewQuizForm(request, response);

break;

case “/insertQuiz”:

insertQuiz(request, response);

break;

case “/deleteQuiz”:

deleteQuiz(request, response);

break;

case “/editQuiz”:

editQuiz(request, response);

break;

case “/updateQuiz”:

updateQuiz(request, response);

break;

case “/listQuizzes”:

listQuizzes(request, response);

break;

case “/startQuiz”:

startQuiz(request, response);

break;

case “/submitAnswers”:

submitAnswers(request, response);

break;

case “/viewResult”:

viewResult(request, response);

break;

default:

listQuizzes(request, response);

break;

}

} catch (Exception e) {

e.printStackTrace();

}

}

Protected void doPost(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {

doGet(request, response);

}

Private void listQuizzes(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {

List<Quiz> quizzes = quizDAO.getAllQuizzes();

Request.setAttribute(“listQuizzes”, quizzes);

RequestDispatcher dispatcher = request.getRequestDispatcher(“quiz-list.jsp”);

Dispatcher.forward(request, response);

}

Private void showNewQuizForm(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {

RequestDispatcher dispatcher = request.getRequestDispatcher(“quiz-form.jsp”);

Dispatcher.forward(request, response);

}

Private void insertQuiz(HttpServletRequest request, HttpServletResponse response) throws IOException {

String title = request.getParameter(“title”);

String description = request.getParameter(“description”);

Quiz quiz = new Quiz(title, description);

quizDAO.insertQuiz(quiz);

response.sendRedirect(“listQuizzes”);

}

Private void deleteQuiz(HttpServletRequest request, HttpServletResponse response) throws IOException {

Int id = Integer.parseInt(request.getParameter(“id”));

quizDAO.deleteQuiz(id);

response.sendRedirect(“listQuizzes”);

}

Private void editQuiz(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {

Int id = Integer.parseInt(request.getParameter(“id”));

Quiz existingQuiz = quizDAO.getQuizById(id);

Request.setAttribute(“quiz”, existingQuiz);

RequestDispatcher dispatcher = request.getRequestDispatcher(“quiz-edit.jsp”);

Dispatcher.forward(request, response);

}

Private void updateQuiz(HttpServletRequest request, HttpServletResponse response) throws IOException {

Int id = Integer.parseInt(request.getParameter(“id”));

String title = request.getParameter(“title”);

String description = request.getParameter(“description”);

Quiz quiz = new Quiz(id, title, description);

quizDAO.updateQuiz(quiz);

response.sendRedirect(“listQuizzes”);

}

Private void startQuiz(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {

Int id = Integer.parseInt(request.getParameter(“id”));

Quiz quiz = quizDAO.getQuizById(id);

Request.setAttribute(“quiz”, quiz);

RequestDispatcher dispatcher = request.getRequestDispatcher(“quiz-take.jsp”);

Dispatcher.forward(request, response);

}

Private void submitAnswers(HttpServletRequest request, HttpServletResponse response) throws IOException, ServletException {

Int quizId = Integer.parseInt(request.getParameter(“quizId”));

Quiz quiz = quizDAO.getQuizById(quizId);

Int score = 0;

For (Question question : quiz.getQuestions()) {

String userAnswer = request.getParameter(“question\_” + question.getId());

If (question.getCorrectAnswer().equals(userAnswer)) {

Score++;

}

}

HttpSession session = request.getSession();

Session.setAttribute(“result”, new Result(quizId, score, quiz.getQuestions().size()));

Response.sendRedirect(“viewResult”);

}

Private void viewResult(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException {

HttpSession session = request.getSession();

Result result = (Result) session.getAttribute(“result”);

Request.setAttribute(“result”, result);

RequestDispatcher dispatcher = request.getRequestDispatcher(“quiz-result.jsp”);

Dispatcher.forward(request, response);

}

}