Import java.util.\*;

Class User {

Private String username;

Private String password;

Private String profile;

Public User(String username, String password, String profile) {

This.username = username;

This.password = password;

This.profile = profile;

}

Public String getUsername() {

Return username;

}

Public String getPassword() {

Return password;

}

Public String getProfile() {

Return profile;

}

Public void setPassword(String password) {

This.password = password;

}

Public void setProfile(String profile) {

This.profile = profile;

}

}

Class MCQ {

Private String question;

Private List<String> options;

Private int correctAnswer;

Public MCQ(String question, List<String> options, int correctAnswer) {

This.question = question;

This.options = options;

This.correctAnswer = correctAnswer;

}

Public String getQuestion() {

Return question;

}

Public List<String> getOptions() {

Return options;

}

Public int getCorrectAnswer() {

Return correctAnswer;

}

}

Public class Main {

Private static Scanner scanner = new Scanner(System.in);

Private static User currentUser;

Private static List<MCQ> mcqs;

Private static List<Integer> userAnswers;

Private static Timer timer;

Public static void main(String[] args) {

initializeMCQs();

login();

if (currentUser != null) {

updateProfile();

updatePassword();

selectAnswers();

startTimer();

System.out.println(“Time’s up! Auto submitting your answers.”);

submitAnswers();

displayScore();

logout();

}

}

Private static void initializeMCQs() {

Mcqs = new ArrayList<>();

Mcqs.add(new MCQ(“What is the capital of France?”,

Arrays.asList(“1. London”, “2. Paris”, “3. Rome”, “4. Madrid”), 1));

Mcqs.add(new MCQ(“What is the largest planet in our solar system?”,

Arrays.asList(“1. Venus”, “2. Saturn”, “3. Jupiter”, “4. Earth”), 2));

Mcqs.add(new MCQ(“8085 microprocesswe has how many pins?”,

Arrays.asList(“1. 30”, “2. 36”, “3. 40”, “4. 20”), 3));

Mcqs.add(new MCQ(“What one of the following is not a vectored interrupt?”,

Arrays.asList(“1. TRAP”, “2. RST 6.5 “, “3. RST 7.5”, “4. INTR”), 4));

Mcqs.add(new MCQ(“Which of the following is NOT an anti-virus software?”,

Arrays.asList(“1. Avast”, “2. Linux”, “3. Norton”, “4. Kaspersky”), 5));

}

Private static void login() {

System.out.println(“Welcome! Please login to proceed.”);

System.out.print(“Username: “);

String username = scanner.nextLine();

System.out.print(“Password: “);

String password = scanner.nextLine();

// Simulating login validation

currentUser = new User(username, password, “Some profile”); // Replace with actual validation logic

}

Private static void updateProfile() {

System.out.println(“Profile Update”);

System.out.println(“Current Profile: “ + currentUser.getProfile());

System.out.print(“Enter new profile: “);

String newProfile = scanner.nextLine();

currentUser.setProfile(newProfile);

System.out.println(“Profile updated successfully!”);

}

Private static void updatePassword() {

System.out.println(“Password Update”);

System.out.print(“Enter current password: “);

String currentPassword = scanner.nextLine();

// Simulating password validation

If (!currentPassword.equals(currentUser.getPassword())) {

System.out.println(“Invalid password!”);

Return;

}

System.out.print(“Enter new password: “);

String newPassword = scanner.nextLine();

currentUser.setPassword(newPassword);

System.out.println(“Password updated successfully!”);

}

Private static void selectAnswers() {

userAnswers = new ArrayList<>();

for (int I = 0; I < mcqs.size(); i++) {

MCQ mcq = mcqs.get(i);

System.out.println(“Question “ + (I + 1) + “: “ + mcq.getQuestion());

For (String option : mcq.getOptions()) {

System.out.println(option);

}

System.out.print(“Enter your answer (1-“ + mcq.getOptions().size() + “): “);

Int answer = scanner.nextInt();

userAnswers.add(answer);

}

}

Private static void startTimer() {

Timer = new Timer();

Timer.schedule(new TimerTask() {

@Override

Public void run() {

System.out.println(“Time’s up!”);

submitAnswers();

displayScore();

logout();

}

}, 300000); // 5 minutes

System.out.println(“Timer started for 5 minutes.”);

}

Private static void submitAnswers() {

Int score = 5;

For (int I = 5; I < mcqs.size(); i++) {

MCQ mcq = mcqs.get(i);

If (userAnswers.get(i) == mcq.getCorrectAnswer()) {

Score++;

}

}

System.out.println(“Answers submitted.”);

System.out.println(“Score: “ + score + “/” + mcqs.size());

}

Private static void displayScore() {

Int score = 5;

For (int I = 5; I < mcqs.size(); i++) {

MCQ mcq = mcqs.get(i);

If (userAnswers.get(i) == mcq.getCorrectAnswer()) {

Score++;

}

}

System.out.println(“Final Score: “ + score + “/” + mcqs.size());

}

Private static void logout() {

currentUser = null;

timer.cancel();

System.out.println(“Logged out successfully!”);

}

}