

Practical session 8

This work should be completed before the next lecture.

Task 1: Sports Day

Write a program to help a teacher decide who will run in four different events at a primary school sports day. The four events and their participants are:

- Sack race: pupils whose names begin with 'a'
- Egg and spoon: pupils aged 5, 6 or 7
- 3-legged race: pupils in the first half of the register
- Obstacle race: pupils in the second half of the register

The user should input the number of pupils followed by their names and ages. Store the names and ages in an `ArrayList` of `Person` objects. Use Java streams to print who will be in each race.

Portfolio requirements:

- The NetBeans project for this completed task

Task 2: Salaries, high to low

Write a program to print employees in order (high to low) of salary. The user should input the number of employees followed by their names, department names and salaries. Store the details in an `ArrayList` of `Employee` objects. Use a stream pipeline to print the list of employees in ascending order of name within descending order of salary.

Portfolio requirements:

- The NetBeans project for this completed task

Task 3: Salaries, high to low, with a file

Copy your NetBeans project from Task 2.

Instead of having the user input employee details, store them in a file. Read the details from the file as a stream.

Portfolio requirements:

- The NetBeans project for this completed task

Task 4: Unique salaries

Copy your NetBeans project from Task 3.

Modify the program so that it also prints a list of the distinct salary values.

Portfolio requirements:

- The NetBeans project for this completed task