



F7.5 Project: the logbook

Name _____

Class _____

Date _____

What this lesson is about

Log every run to a file, load the file into a table, and find the best run with SQL.

- The brief
- The logbook file
- Plan
- Step 1: read the log and find the next run number
- Step 2: load the file into a table
- Step 3: put it together

Questions

4 marks in all

1. In the logbook, why is the file used as well as the database table? [1 mark]
☐ A The file keeps the runs between sessions; the table is rebuilt from it to query
☐ B The table cannot hold numbers
☐ C SQL cannot read files
☐ D Files are required by SQL
2. logbook.csv has a header line and four runs. How many lines does the file have? [1 mark]

3. Which query finds the fastest run? [1 mark]
☐ A `SELECT run FROM runs ORDER BY cm / seconds DESC`
☐ B `SELECT run FROM runs ORDER BY cm ASC`
☐ C `SELECT COUNT(*) FROM runs`
☐ D `SELECT run FROM runs WHERE seconds = 0`
4. What happens to the logbook if the program opens logbook.csv with mode "w" to add a run? [1 mark]
☐ A Every earlier run is lost
☐ B The run is added at the end
☐ C The file is read
☐ D Nothing changes

The task: the logbook

Build the program from the brief. Print `runs logged: <n>` using `SELECT COUNT(*)`, and `fastest: run <n> at <speed> cm/s` with the speed rounded to 1 decimal place, using `ORDER BY`. The task types `28`, and starts from the four-run logbook above every time.

```
# the two lines every program starts with: the commands, then the robot
from bugbot import *
connect()

import sqlite3
```

Plan your program here, then type it in and press Run.



Do it on the robot

www.bugbotlab.com/learn/f7-5-project-the-logbook/

The simulator checks it and tells you when it passes. Nothing to install, no account.

Challenges

1. Add a task name to each run, and report the fastest run of each task.
2. Refuse to log a run if the robot stopped more than 2 cm short of the distance asked for.
3. Store the log in two files, `runs.csv` and `robots.csv`, and load them into two linked tables.