



A14.7 Computing legislation

Software development, law and ethics · A level · OCR H446 1.5.1, AQA
7517 4.8.1 · about 45 min

What this lesson is about

The Data Protection Act 2018 and UK GDPR, the Computer Misuse Act 1990, the Copyright, Designs and Patents Act 1988 and the Regulation of Investigatory Powers Act 2000, applied to a robot's delivery log.

- The Data Protection Act 2018 and UK GDPR
- The Computer Misuse Act 1990
- The Copyright, Designs and Patents Act 1988
- The Regulation of Investigatory Powers Act 2000
- Which law applies?

Questions

6 marks in all

1. A student guesses a teacher's password and reads their emails, without changing anything. Which offence have they committed? [1 mark]
- ☐ A Unauthorised access to computer material, under the Computer Misuse Act 1990
 - ☐ B No offence, because nothing was damaged
 - ☐ C Breach of copyright under the Copyright, Designs and Patents Act 1988
 - ☐ D An offence under the Regulation of Investigatory Powers Act 2000

Answer: A. Section 1 of the Computer Misuse Act needs no damage: access without authorisation is enough.

2. A delivery log keeps records for three years though they are only needed for a month. Which data protection principle does this break? [1 mark]
- ☐ A Storage limitation
 - ☐ B Accuracy
 - ☐ C Purpose limitation
 - ☐ D Lawfulness, fairness and transparency

Answer: A. Personal data must be kept no longer than is needed for its purpose.

3. Which Act sets out when public bodies may intercept communications and require a person to hand over encryption keys? [1 mark]
- ☐ A The Regulation of Investigatory Powers Act 2000
 - ☐ B The Computer Misuse Act 1990
 - ☐ C The Copyright, Designs and Patents Act 1988
 - ☐ D The Data Protection Act 2018

Answer: A. RIPA regulates surveillance and investigation by public bodies, including interception and access to protected data.

4. A log replaces names with codes, and the key linking codes to names is stored separately. Is it still personal data? [1 mark]
- ☐ A Yes: it is pseudonymised, and the key can re-identify people
 - ☐ B No: it has no names in it
 - ☐ C No: codes are never personal data
 - ☐ D Only if it is stored in the cloud

Answer: A. Pseudonymised data remains personal data; only truly anonymised data falls outside the law.

5. Which of these are rights of a data subject under UK GDPR? [1 mark]

Tick every answer that is true.

- ☐ A The right of access
- ☐ B The right to erasure
- ☐ C The right to rectification
- ☐ D The right to see anyone else's data
- ☐ E The right to free software

Answer: A, B, C. Data subjects have rights over their own data, including access, rectification and erasure.

6. Under the Copyright, Designs and Patents Act 1988, when does a program you write become protected by copyright? [1 mark]
- ☐ A Automatically, as soon as it is written
 - ☐ B Only after it is registered with a government office
 - ☐ C Only if it is sold
 - ☐ D Only if it has a licence file

Answer: A. Copyright is automatic; patents, by contrast, must be applied for.

The task: keep the log lawful

The delivery robot's log breaks two data protection principles: it keeps records for too long, and it keeps a note it does not need. Fix it, and pseudonymise the names. `records` is a list of tuples `(day, name, room, item, note)`: `day` is a whole number (the day of the school year the delivery was made), and the rest are strings. `TODAY` is today's day number, and `RETENTION_DAYS` is how many days a record may be kept. 1. Go through the records in order. A record is too old if `TODAY - day` is more than `RETENTION_DAYS`: delete it (leave it out) and count it. 2. For each kept record, pseudonymise the name: the first new name met gets the code `P1`, the next new name `P2`, and so on, stored in a dictionary `key` from name to code. The same name always gets the same code. 3. Print each kept record as `<day> <code> <room> <item>`, leaving out the name and the note. 4. Print `deleted: <n>`. 5. Sam Okoye has made a subject access request. Using `key`, count the kept records that belong to Sam Okoye, and print `access request for Sam Okoye: <n> records`. Compare with `RETENTION_DAYS` in your code, and make the codes with your dictionary. The robot stays still.

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

TODAY = 40
RETENTION_DAYS = 30
records = [
    (5, "Amira Khan", "B12", "textbooks", "left at door"),
    (12, "Sam Okoye", "C3", "laptop", "signed"),
    (15, "Leo Brandt", "B12", "printer paper", "no answer"),
    (22, "Sam Okoye", "C3", "charger", "signed"),
    (31, "Amira Khan", "A1", "keys", "signed"),
    (38, "Sam Okoye", "C4", "textbooks", "signed"),
]
```

The hint students can ask for: Work through the records in order. First decide whether a record is too old to keep; if it is, count it and move on. For a kept record, look the name up in the key, adding the next code if the name is new, and print only the fields the robot needs. Answer the access request from the key and the kept records.

A solution

```
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    (31, "Amira Khan", "A1", "keys", "signed"),
    (38, "Sam Okoye", "C4", "textbooks", "signed"),
]

key = {}
kept = []
deleted = 0
for day, name, room, item, note in records:
```

```
if TODAY - day > RETENTION_DAYS:
    deleted += 1
    continue
if name not in key:
    key[name] = "P" + str(len(key) + 1)
kept.append((day, key[name], room, item))

for day, code, room, item in kept:
    print(day, code, room, item)
print("deleted:", deleted)

person = "Sam Okoye"
code = key.get(person)
print(f"access request for {person}: {sum(1 for r in kept if r[1] == code)} records")
```

Any program that meets the task's checks is marked correct in the simulator; this is one way, not the only way.