Unit 10 · Building an App People Use

WORKSHEET

Full marks 31

Name _____ Class _____ Roll no. ____ Date _____ Marks _____ / 31

1 Key words [4]

Fill in the blanks with words from the box. Two words in the box are not needed. Each blank carries 0.5 mark.

acceptance criterion	**dark pattern**	**funnel**	**leading question**	**median**
minimum viable product	**mode**	**stakeholder**	**System Usability Scale**	**user story**

A question that tells the person which answer you want is a _____. A need written as "As a …, I want …, so that …" is a _____, and each exact, testable condition for when it is done is an _____. A first version with just enough in it to be used and learned from is a _____. For the times testers take, use the _____, the middle value when they are sorted. The ten-statement questionnaire that gives a score from 0 to 100 is the _____. Counting how many people reach each step of the same journey is a _____. A design that pushes users into a choice instead of informing them is a _____.

2 Multiple choice [5]

Choose the correct option for each of the following questions.

i. Which interview question will tell the team the most about what students really do? [1]

a. Would you use an app to get used books?
b. Don't you think old books should be reused?
c. What did you do with your books after last year's exams?
d. How much would you pay for our app?

ii. Which is a well-written user story? [1]

a. As a user, I want a database.
b. Make the Keep button green.
c. As a parent, I want to see a book's edition, so that we don't take one the teacher won't use.
d. As a student, I want the app to be good.

iii. Six testers took 30, 34, 36, 40, 44 and 200 seconds. What is the median time? [1]

a. 36 seconds **b.** 38 seconds
c. 40 seconds **d.** 64 seconds

iv. What does a System Usability Scale score of 75 mean? [1]

a. The app is 75% usable.
b. 75% of testers finished the task.
c. Testers rated it better than the average of about 68 in many studies.
d. The app needs 25% more work.

v. In a funnel, 400 students opened the app, 150 chose a grade, and 140 of those kept a book. Where should the team look first? **[1]**

a. between opening the app and choosing a grade, where 250 students stopped

b. between choosing a grade and keeping a book

c. at the 140 who kept a book

d. nowhere: 140 is a good number

3 The System Usability Scale [3]

Work it out in the space below.

A tester answered the ten SUS statements, in order: 5, 1, 4, 2, 4, 1, 5, 2, 4, 3. Each odd statement scores its answer − 1, and each even statement 5 − its answer. Work out the score, and say whether it is above or below the average of about 68.

Answer: _____

4 What does it print? [5]

Write exactly what the program prints, in the box under it.

```
1  import sqlite3
2
3  db = sqlite3.connect(":memory:")
4  db.execute("CREATE TABLE books (id INTEGER PRIMARY KEY, kept_for TEXT)")
5  db.executemany("INSERT INTO books (kept_for) VALUES (?)", [(None,), (None,)])
6
7  KEEP = "UPDATE books SET kept_for = ? WHERE id = ? AND kept_for IS NULL"
8
9  def keep(book, student):
10     return db.execute(KEEP, (student, book)).rowcount
11
12 print(keep(1, "8B-14"), keep(1, "8A-3"), keep(3, "9C-7"), keep(2, "8A-3"))
13 print(db.execute("SELECT id, kept_for FROM books").fetchall())
```

```
OUTPUT
```

A teammate changes `keep()` into two steps: a SELECT to check that `kept_for` is empty, then, if it is, an UPDATE. Tested one request at a time, it prints the same. Why is it still wrong on a real server?

5 Did it meet its targets? [3]

Read the question, then answer.

Before testing their quiz app, a team sets these usability targets: 4 of 5 testers finish a quiz without help; median time under 3 minutes; median SUS at least 68. Their five testers: finished, yes for four and no for one; times for those who finished, 2:10, 2:40, 3:30 and 4:50; SUS scores 60, 65, 70, 72.5, 85. Which targets are met? Write one honest sentence summing up the result.

6 Write user stories [4]

Answer the following question.

A school canteen wants an app so that students can order tiffin before break and skip the queue. Write three user stories for it, for at least two kinds of user, and two acceptance criteria (Given, When, Then) for one of them.

7 Interviews that find the truth [3]

Answer the following question.

Rewrite each interview question so that it finds out what really happens, and say what was wrong with it.

i. Would you use an app to find a tutor?
ii. Don't you think tuition fees are too high?
iii. How much would you pay for the app each month?

8 Mean or median? [2]

Read the question, then answer.

Five testers took 19, 24, 27, 33 and 150 seconds. Find the mean and the median. Which describes a typical tester better, and why?

9 Think [2]

Think, then answer.

The principal asks the team to put “Only 3 left! Keep yours now!” in red on every grade’s list, “so that more students use it”. It is true that some subjects have only three books. Should the team do it?

10 Activity: Test a paper prototype (not marked)

Work in a group of three. Draw the screens of a small app on paper (one sheet a screen): the canteen’s tiffin order, or a page to book the library’s computers. Find a tester from another class. One of you gives the task and keeps quiet, one plays the computer, and one takes notes. Give the task as a goal, such as “Order a plate of chowmein for today’s break”.

What the tester did or said	Where they hesitated or went wrong	What we will change