Grade 10 Computing

Unit 6 · Fixing Problems and Learning Any New Tool

WORKSHEET

Full marks 27

Name _____ Class _____ Roll no. ____ Date _____ Marks _____ / 27

1 Key words [4]

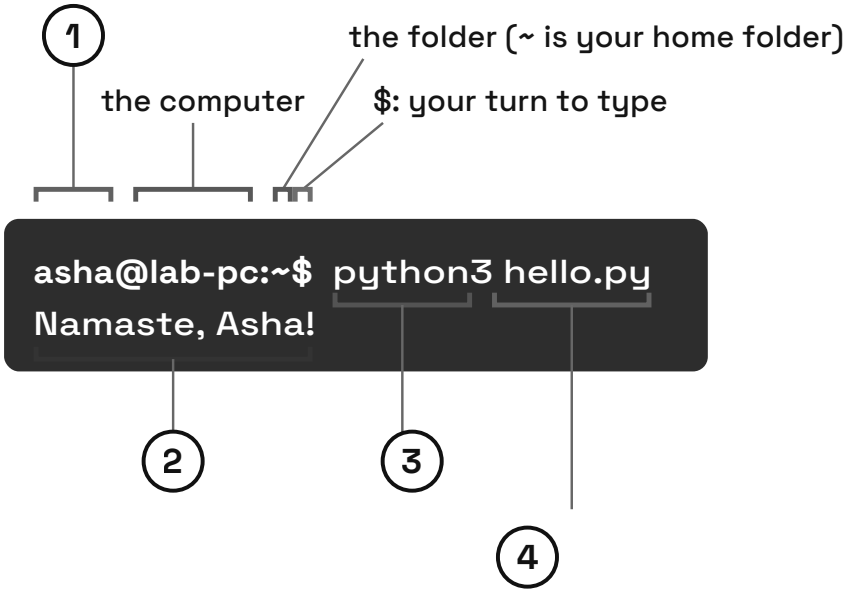
Fill in the blanks with words from the box. Two words in the box are not needed. Each blank carries 0.5 mark.

absolute path	**checksum**	**error code**	**isolate**	**package manager**	**prompt**	**relative path**
shell	**troubleshooting**	**working directory**				

Finding the cause of a problem with a computer, a phone or any machine, and fixing it step by step, is _____. A number or short name in an error message, such as `0x80070070`, that means one exact thing to the program is an _____. To _____ a problem is to find which part of a chain has failed, by tests that each rule out some parts. The hash a maker publishes beside a download, to check that your file is the real one, is its _____. A program that installs other programs from a list its makers check, used by typing a command, is a _____. The program in a terminal that reads your commands and runs them is the _____. On a command line you are always in one folder, the _____. A path that starts at the root, /, such as `/home/asha/school`, is an _____.

2 Label the diagram [2]

The diagram shows a command typed in a terminal, and its output. Write what belongs in place of 1 to 4. Each carries 0.5 mark.



1. _____ 2. _____

3. _____ 4. _____

3 Multiple choice [5]

Choose the correct option for each of the following questions.

i. Why does restarting a phone often fix an app that has frozen? [1]

a. It deletes the app and puts in a new copy.

b. It clears the phone's storage, where the app's mistake was saved.

c. It empties memory, so the app starts again from storage in a clean state.

d. It downloads an update for the app.

ii. A program shows: Couldn't save "report.docx". The file is open in another program. What should you try first? [1]

a. Restart the computer at once, without saving anything.

b. Find the other program that has report.docx open, close the file there, then save again.

c. Reinstall the program.

d. Buy more storage.

iii. Bibek's search for his error gives no useful results. His search was: `error in C:\Users\Bibek\Desktop\project final 2.py line 14 please help`. What is the best change? [1]

a. Add more words like "urgent" and "fast".

b. Search for the error's exact message in quotes with the program's name, and leave out his file name, folder and line number.

c. Search for his name, so the results are about his computer.

d. Give up: search engines can't find errors.

iv. An installer you downloaded asks: Do you want to allow this app to make changes to your device? It says **Publisher: Unknown**, and the program is a well-known photo editor. What should you do? [1]

a. Click Yes: all installers ask this.

b. Click No, delete the file, and download the program again from its maker's own website.

c. Click Yes, then run a virus scan afterwards.

d. Turn off the warning so it doesn't ask again.

v. A website says your download's SHA-256 checksum is `9f2c…41ab`, and the one you work out is `9f2c…41ac`. What does that tell you? [1]

a. The file is fine: the start is the same.

b. The file is not the one the maker published: don't install it.

c. Checksums always differ a little on different computers.

d. You should install it as administrator.

4 Trace the commands [3]

Asha's home folder, `/home/asha`, holds the folders Downloads, Pictures and school. The school folder holds two folders, class10 and science. She starts in her home folder. Write the working directory after each command: what `pwd` would print. Each row carries 0.5 mark.

Command	Working directory after it
`cd school/class10`	
`cd ..`	
`cd science`	
`cd ~`	
`cd Downloads`	
`cd ../school/class10`	

5 What does the terminal print? [3]

Asha has the same folders. Write exactly what the terminal prints, in the box under the commands.

Asha is in her home folder. She types these commands, one after another, pressing Enter after each.

```
pwd
cd school
ls
cd Science
cd ../Pictures
pwd
```

OUTPUT

6 Read the error [3]

Read the program and its error, then answer.

Sujan runs this program on his laptop.

```
marks = {"Rojina": 96, "Sujan": 47, "Asha": 81}
total = 0
for name in marks:
    total = total + marks[name]
print("Average:", total / len(mark))
```

ERROR

```
Traceback (most recent call last):
  File "C:\Users\Sujan\Documents\school\average.py", line 5, in <module>
    print("Average:", total / len(mark))
                                  ^^^^
NameError: name 'mark' is not defined. Did you mean: 'marks'?
```

i. Which line stops the program, and with which kind of error?
ii. Write a good search for this error. Which part of the message should he leave out, and why?
iii. Write the corrected line, and what the program then prints.

7 Short answers [5]

Write short answers to the following questions.

a. Explain why restarting a device often fixes a problem, and why a restart is not a real fix for a problem that keeps coming back. [2]

b. Sita's laptop can't open a website at home. Describe three tests she can do to find out whether the problem is in the laptop, the router and line, or the website, and what each result would show. [3]

8 Think [2]

Think, then answer.

In five years you will need a program that hasn't been invented today. Which parts of what this unit taught about learning a new program will still help you learn it, and which won't? Give one of each, with a reason.

9 Activity: Find the broken setting (not marked)

Work in pairs on a lab computer, with your teacher's permission. One partner breaks one setting from the unit's list (such as the sound muted, the keyboard layout changed, or the mouse buttons swapped) while the other looks away. The other describes the problem, then troubleshoots it with the method. Keep a troubleshooting log, then swap.

What I tried	What happened	What it ruled out