

9. A program is being designed to allow users to search for properties for sale.

(a) (i) Pseudocode was used to design the program.

State another technique that could be used to design the program. 1

---

(ii) The software development process is described as iterative.

Explain why it may be necessary to return to the design stage. 1

---

---

---

[Turn over



\* X 8 1 6 7 5 0 1 1 1 \*



**9. (continued)**

- (b) (i) The user can search for properties priced from £50,000 to £600,000.

Using a design technique of your choice, design an efficient solution to check that the price entered is valid.

4

- (ii) Test data is used to ensure the validation of the price entered works correctly.

Complete the test table below with one appropriate numerical value for each input.

2

Type of test	Input	Expected result
Extreme		Program continues
Exceptional		Program displays an error message



\* X 8 1 6 7 5 0 1 1 2 \*

**9. (continued)**

- (c) A username and password are added to allow users to save searches.

Part of the code is shown below.

...

```
Line 9    RECEIVE un FROM KEYBOARD
Line 10   RECEIVE pwd FROM KEYBOARD
Line 11   IF un = sUn OR pwd = sPwd THEN
Line 12     SEND "Welcome to saved searches" TO DISPLAY
Line 13   END IF
```

...

- (i) Explain how indentation is used to make the code above more readable.

1

---



---

- (ii) Describe how Line 11 could be made more readable.

1

---



---

- (iii) A user enters the password below.

GRK\_0183\_J

State how many bits would be required to store the password using extended ASCII code.

1

- (iv) Line 11 should have used AND instead of OR.

State the type of error that using OR would cause when the program is executed.

1

---

- (d) After final testing, the program is run without requiring any further translation software.

State the type of translator that has been used.

1

---