9. A 9-hole golf course is introducing an app to replace paper scorecards. The total score is the number of times the player hits the ball to complete all 9 holes.

Below is an example of a paper scorecard that a player has filled in.

Name: *Sanya Abioye* Date: *25/5/2023*	
Hole	Score
1	*3*
2	*4*
3	*9*
4	*4*
5	*6*
6	*6*
7	*4*
8	*5*
9	*5*
Total score	*46*

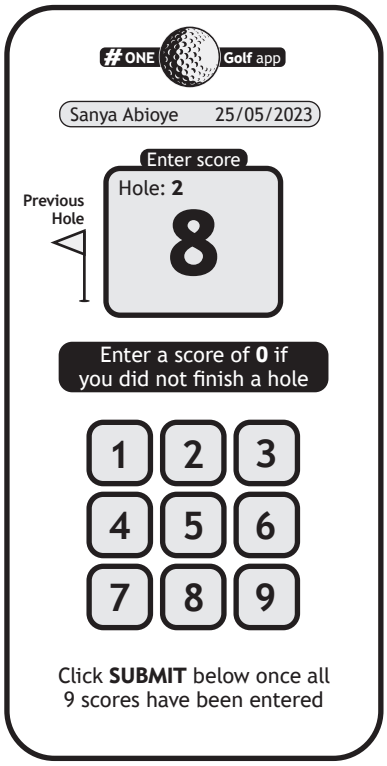
(a) Complete the analysis for the app by identifying the inputs and the output. **2**

Inputs	
Process	Add up the scores
Output	

[Turn over

9. (continued)

(b) The following user interface is designed for the player to enter their score for each hole.



Give two reasons why this user interface design is not fit for purpose. **2**

Reason 1 _____

_____

Reason 2 _____

_____

9. (continued)

(c) Each hole has a target score known as the par value.

If a score entered is three or more above the par value for that hole it is adjusted to the par value plus two. This is shown below for holes 3 and 6.

Hole	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**Total Score**
Par	3	4	4	4	4	3	4	4	5	
Score	3	4	~~9~~	4	6	~~6~~	4	5	5	~~46~~
Final score	3	4	**6**	4	6	**5**	4	5	5	42

Part of the code for the app is shown below.

```
...
Line 10   REPEAT 9 TIMES
Line 11     RECEIVE par FROM (INTEGER) KEYBOARD
Line 12     RECEIVE score FROM (INTEGER) KEYBOARD
Line 13     < calculate final score for each hole >
Line 14     < update totalScore >
Line 15   END REPEAT
Line 16   SEND totalScore TO DISPLAY
...
```

Using a programming language of your choice, write the code for line 13. **3**

(d) The final scores are stored within the app.

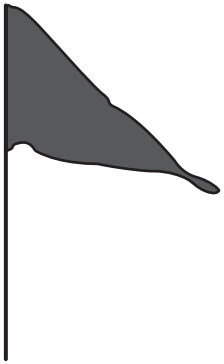
State the most suitable data structure and data type for storing the final score for each hole. **2**

Data structure _____

Data type _____

9. (continued)

(e) The app uses the following bit-mapped graphic.



Describe how a bit-mapped graphic is represented in a computer system's memory. **2**