Task	Expected response	Additional guidance	Marks available	
2	**Software design and development**			
2a	**1 mark** for each: **Input :** Enter the number of usernames **Process**: Generate random number or Generate/select (random) endings **Output**: Display the list of generated usernames	 Must be plural unless very clearly explained that input was only one student.	3	Analysis (3)
b	One mark each for: ♦ Array of strings used to store endings ♦ Assign endings		2	Implementation (15)
	Variables or arrays used to store: ♦ partial student name ♦ username	Variable/array names may be anywhere within code	1	
	Input number of students		1	
	One mark each for: ♦ single fixed loop which matches design ♦ correct number of iterations for input		2	
	Input Validation: input validation carried out before username is generated		1	
	Input Validation: loop condition correct	Condition loop may be either pre or post condition: • Length(Partial Name) = 3 • Length(Partial Name) NOT(3)	1	
	Input Validation: input inside loop	If no validation loop at all a single mark may be awarded for the input.	1	
	Input Validation: error message inside loop		1	
	1 of 5 random numbers generated/stored		1	

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b	Use random number to select correct ending		1	Implementation (15)
	Step 6 refinement matches design	Award mark if candidate uses else if (with criteria on each line). Do not award a mark if else if is completed with else.	1	
	Concatenation student name and ending		1	
	Display username		1	
c	One mark for each correct example of test data: ♦ normal ♦ exceptional	Accept multiple answer in each test table box. Do not accept: • 123, 567 etc as exceptional data as this would be accepted as a 3 character string. • a description of normal and exception test data (for example: normal = 3 characters) • screenshots of a test run, as a test table should include potential tests to be carry out	1	Testing (3)
d	Printed evidence of the output of a test run showing 6 usernames, each starting with chr.	If no input validation in code then accept usernames which include the full student names. (for example Chrising)	1	

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e	Evaluation of efficiency of constructs within the candidates own code may include: ♦ inefficiency ○ Multiple if statements used instead of a single if ○ If statement could have used array index instead of multiple if statements ♦ efficiency ○ Use of an array instead of separate variables for endings ○ Use of loops to reduce code	Other acceptable answers may be marked correct if evident in candidates code.	1	Evaluation (4)
	Evaluation of robustness of candidates own code may include: ♦ Discussion of validation or absence of validation		1	
	Evaluation of readability: ♦ Discussion of candidates own code.	Evaluation must contain an element of evaluation rather than simple statements of terms. For example "I have used white space to highlight structures in my program" not "I have used white space".	1	
	Evaluation of Fitness for purpose of the solution may include: ♦ Username not unique ♦ Limited number of endings		1	