# Answers to Questions from TT3.1

Name:

Student ID:

## 1: Assume that age has the value 0. List the actions the computer executes when it runs the following code.

puts('Message 0')

while (age < 5)

puts('Message 1')

age = age + 1

end

puts('Message 2')

|  |  |  |
| --- | --- | --- |
| Sequence | Action | Note |
| 1 | Calls the puts() procedure with the text ‘Message 0’ |  |
| 2 | Evaluates the expression (condition of while) age < 5 | Condition is true. |
| 3 | Jumps into the while loop |  |
| 4 |  |  |
| 5 |  | Age now 1 |
| 6 | Returns to the top of the while loop |  |
| 7 | Evaluates the expression (condition of while) age < 5 | Condition is true. |
| 8 |  |  |
| 9 |  |  |
| 10 |  |  |
| 11 |  |  |
| 12 |  |  |
| 13 |  |  |
| 14 |  |  |
| 15 |  |  |
| 16 |  |  |
| 17 |  |  |
| 18 |  |  |
| 19 |  |  |
| 18 |  |  |
| 19 |  |  |
| 20 |  |  |
| 21 |  |  |
| 22 |  |  |
| 23 | Returns to the top of the while loop |  |
| 24 | Jumps to the end of the while loop |  |
| 22 | Calls the puts() procedure with the text ‘Message 2’ |  |

2. Assume that age has the value 8. List the actions the computer executes when it runs the following code.

puts('Message 0')

while (age > 5)

puts('Message 1')

age = age - 2

end

puts('Message 2')

|  |  |  |
| --- | --- | --- |
| Sequence | Action | Note |
| 1 | Calls the WriteLn procedure with the text ‘Message 0’ |  |
| 2 | Evaluates the expression (condition of while) age > 5 | Condition is true. |
| 3 | Jumps into the while loop |  |
| 4 |  |  |
| 5 |  | Age now 6 |
| 6 | Returns to the top of the while loop |  |
| 7 | Evaluates the expression (condition of while) age > 5 | Condition is true. |
| 8 | Jumps into the while loop |  |
| 9 |  |  |
| 10 |  |  |
| 11 |  |  |
| 12 | Jumps to the end of the while loop |  |
| 13 | Calls the WriteLn procedure with the text ‘Message 2’ |  |

End of Task