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| **Skill 31.01 Exercise 1** |
| What is displayed as a result of executing the algorithm in the flowchart?    result = result + num MOD 10  num = floor(num/10)  num = 5678  result = “”  num > 0  DISPLAY(result) |
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| **Skill 31.02 Exercise 1** | |
| row = 0;  col = 0;  WHILE(row <= 5){  FILL(grey)  row = row + 1  col = col + 1  MOVE\_TO[row][col]  } | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  | |  |  |  |  |  |  | |  |  |  |  |  |  | |  |  |  |  |  |  | |  |  |  |  |  |  | |  |  |  |  |  |  | |
| row = 0;  col = 0;  WHILE(row <= 5){  if((row MOD 2)EQUALS(0)){  FILL(grey)  }  row = row + 1  col = col + 1  MOVE\_TO[row][col]  } | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  | |  |  |  |  |  |  | |  |  |  |  |  |  | |  |  |  |  |  |  | |  |  |  |  |  |  | |  |  |  |  |  |  | |
| row = 0;  col = 0;  WHILE(col <= 5){  if((row MOD 2)EQUALS(0)){  FILL(grey)  }  col = col + 1  MOVE\_TO[row][col]  if(col == 5){  row = row + 1  col = 0  }  } | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  | |  |  |  |  |  |  | |  |  |  |  |  |  | |  |  |  |  |  |  | |  |  |  |  |  |  | |  |  |  |  |  |  | |

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| **Skill 31.02 Exercise 2** |
| In the procedure Mystery below, the parameter number is a positive integer. The procedure continues *while number* is less than or equal 0.    Indicate the output for each of the following calls. |
| (a) Mystery(2)  (b) Mystery(3)  (c) Mystery(4) |

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| **Skill 31.02 Exercise 3** |
| A program is created to perform arithmetic operations on positive and negative integers. The program contains the following incorrect procedure, which is intended to return the product of the integers x and y. The loop “REPEAT UNTIL (count = y)” continues while count is not equal to y. |
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| **Skill 31.02 Exercise 4** |
| In a certain science experiment, 75 percent of trials are expected to be successful and 25 percent of trials are expected to be unsuccessful. The program below is inteded to simulate the result of repeated trials of the experiment. The loop “REPEAT 1000 TIMES” continues while TIMES is not equal to 1000. |

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| **Skill 31.03 Exercise 1** |
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| **Skill 31.03 Exercise 2** |
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| **Skill 31.04 Exercise 1** |
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| **Skill 31.04 Exercise 1** |
| The given code accidentally loops infinitely, so something must be wrong with the condition. Can you figure out how to fix it? |
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| **Skill 31.05 Exercise 1** |
| Write a function called *coinFlip* which simulates the flipping of a coin. *coinFlip* should accept a parameter which represents the number of flips, then return the number of heads that result. |
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| **Skill 31.05 Exercise 2** |
| Write a function called *reverseNum* that accepts a number as a parameter, then returns the reversed number. For example, the following call would return 98765  reverseNum(56789); |
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