**SCHOOL OF COMPUTING**

**ST1507 Data Structures and Algorithms (AI)**

**Third Lab Submission Worksheet**

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| **Instructions:**   1. Submit this at BrightSpace under the appropriate dropbox. 2. Name your file “**Name\_StudentID.docx**”   (for example ‘JohnTan\_12345.docx”) |

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| **Student ID** | 21000722 |
| **Class** | DAAA/FT/2B/04 |

# Lab Three - Task Submission 1

### Task 1: Converting a decimal number to binary

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| **Copy and paste the Python code that you have written for this task in this area**  def binary(num):  if num > 0:  return binary(num // 2) + str(num % 2)  return "" |

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| **Paste screenshot(s) of the output of your program here** |

# Lab Three - Task Submission 2

### Task 6: Drawing the Van Koch snowflake

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| **Copy and paste the Python code that you have written for this task in this area**  import turtle  length = 800  def van\_koch(length):  if length < 50:  turtle.forward(length)  else:  van\_koch(length // 4)  turtle.left(45)  van\_koch(length // 4)  turtle.right(90)  van\_koch(length // 4)  turtle.left(45)  van\_koch(length // 4)  turtle.pensize(5)  turtle.pencolor('blue')  turtle.penup()  turtle.hideturtle()  turtle.goto(-(length / 3.3), 0)  turtle.pendown()  van\_koch(length)  turtle.done() |

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| **Paste screenshot(s) of the output of your program here** |