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| **UTC 2.1.1** | **Test StackOperation.clear** |
| **Elementi testati** | Classe: StackOperation; Metodo: clear; |
| **Precondizione** | Stack: 7+11i, 8+11i, 99, 77i, 45i; |
| **Input** | StackOperation SO = new StackOperation(“clear”, Stack);  SO.clear();  bool empty == Stack.isEmpty() |
| **Oracle** | empty==true; |

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| **UTC 2.1.2** | **Test StackOperation.clear** |
| **Elementi testati** | Classe: StackOperation; Metodo: clear; |
| **Precondizione** | Stack: 7+11i, 8+11i, 99, 77i, 45i, 7+11i, 8+11i, 99, 77i, 45i, 7+11i, 8+11i, 99, 77i, 45i, 5.5 +7i, 66.01, 98.25+1.02i, 22-7i, 666.777i, 4.4+7i, 305.2i, 22i, 24.05i; |
| **Input** | StackOperation SO = new StackOperation(“clear”, Stack);  SO.clear();  bool empty == Stack.isEmpty() |
| **Oracle** | empty==true; |

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| **UTC 2.1.3** | **Test StackOperation.clear** |
| **Elementi testati** | Classe: StackOperation; Metodo: clear; |
| **Precondizione** | Stack: ; |
| **Input** | StackOperation SO = new StackOperation(“clear”, Stack);  SO.clear();  bool empty == Stack.isEmpty() |
| **Oracle** | expected = Error;  empty==true; |

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| **UTC 2.2.1** | **Test StackOperation.drop** |
| **Elementi testati** | Classe: StackOperation; Metodo: drop; |
| **Precondizione** | Stack: 7+11i; |
| **Input** | StackOperation SO = new StackOperation(“drop”, Stack);  SO.drop();  bool empty == Stack.isEmpty() |
| **Oracle** | empty==true; |

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| **UTC 2.1.2** | **Test StackOperation.drop** |
| **Elementi testati** | Classe: StackOperation; Metodo: drop; |
| **Precondizione** | Stack: 7+11i, 8+11i, 99, 77i, 45i, 7+11i, 8+11i, 99, 77i, 45i, 7+11i, 8+11i, 99, 77i, 45i, 5.5 +7i, 66.01, 98.25+1.02i, 22-7i, 666.777i, 4.4+7i, 305.2i, 22i, 24.05i; |
| **Input** | StackOperation SO = new StackOperation(“drop”, Stack);  SO.drop();  bool full = Stack.isFull(); |
| **Oracle** | full == false; |

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| **UTC 2.2.3** | **Test StackOperation.drop** |
| **Elementi testati** | Classe: StackOperation; Metodo: drop; |
| **Precondizione** | Stack: 45i, 5.5 +7i, 66.01; |
| **Input** | StackOperation SO = new StackOperation(“drop”, Stack);  SO.drop();  int size = Stack.size; |
| **Oracle** | size == 2; |

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| **UTC 2.2.4** | **Test StackOperation.drop** |
| **Elementi testati** | Classe: StackOperation; Metodo: drop; |
| **Precondizione** | Stack: ; |
| **Input** | StackOperation SO = new StackOperation(“drop”, Stack);  SO.drop();  bool empty = isEmpty(); |
| **Oracle** | expected = SystemError;  empty==true; |

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| **UTC 2.3.1** | **Test StackOperation.swap** |
| **Elementi testati** | Classe: StackOperation; Metodo: swap; |
| **Precondizione** | Stack: 7+11i, 8+11i; |
| **Input** | StackOperation SO = new StackOperation(“swap”, Stack);  SO.swap();  ComplexNumber top = Stack.pop();  ComplexNumber snd =Stack.pop(); |
| **Oracle** | top.toString() == 8+11i  untop.toString() == 7+11i |

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| **UTC 2.3.2** | **Test StackOperation.swap** |
| **Elementi testati** | Classe: StackOperation; Metodo: swap; |
| **Precondizione** | Stack: 9.5+7i; |
| **Input** | StackOperation SO = new StackOperation(“swap”, Stack);  SO.swap();  ComplexNumber top = Stack.pop();  ComplexNumber untop =Stack.pop(); |
| **Oracle** | expected = Error; |

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| **UTC 2.3.3** | **Test StackOperation.swap** |
| **Elementi testati** | Classe: StackOperation; Metodo: swap; |
| **Precondizione** | Stack: ; |
| **Input** | StackOperation SO = new StackOperation(“swap”, Stack);  SO.swap();  ComplexNumber top = Stack.pop();  ComplexNumber untop =Stack.pop(); |
| **Oracle** | expected == Error; |

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| **UTC 2.4.1** | **Test StackOperation.dup** |
| **Elementi testati** | Classe: StackOperation; Metodo: dup; |
| **Precondizione** | Stack: 5.5 +7i; |
| **Input** | StackOperation SO = new StackOperation(“dup”, Stack);  SO.dup();  ComplexNumber top = Stack.pop();  ComplexNumber untop =Stack.pop(); |
| **Oracle** | top.toString()==untop.toString()==5.5+7i; |

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| **UTC 2.4.2** | **Test StackOperation.dup** |
| **Elementi testati** | Classe: StackOperation; Metodo: dup; |
| **Precondizione** | Stack: ; |
| **Input** | StackOperation SO = new StackOperation(“dup”, Stack);  SO.dup();  ComplexNumber top = Stack.pop();  ComplexNumber untop =Stack.pop(); |
| **Oracle** | expected = Error; |

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| **UTC 2.4.3** | **Test StackOperation.dup** |
| **Elementi testati** | Classe: StackOperation; Metodo: dup; |
| **Precondizione** | Stack: 7+11i, 8+11i, 99, 77i, 45i, 7+11i, 8+11i, 99, 77i, 45i, 7+11i, 8+11i, 99, 77i, 45i, 5.5 +7i, 66.01, 98.25+1.02i, 22-7i, 666.777i, 4.4+7i, 305.2i, 22i, 24.05i; |
| **Input** | StackOperation SO = new StackOperation(“dup”, Stack);  SO.dup();  ComplexNumber top = Stack.pop();  ComplexNumber untop =Stack.pop(); |
| **Oracle** | expected == SyntaxError; |

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| **UTC 2.5.1** | **Test StackOperation.over** |
| **Elementi testati** | Classe: StackOperation; Metodo: over; |
| **Precondizione** | Stack: 77i, 45i; |
| **Input** | StackOperation SO = new StackOperation(“over”, Stack);  ComplexNumber firstTop = Stack.peek();  SO.over();  ComplexNumber secondTop = Stack.pop();  ComplexNumber firstTop1 = Stack.pop();  ComplexNumber secondTop1 =Stack.pop(); |
| **Oracle** | firstTop.toString()==firstTop1.toString()==77i;  secondTop.toString()==secondTop1.toString()==45i; |

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| **UTC 2.5.2** | **Test StackOperation.over** |
| **Elementi testati** | Classe: StackOperation; Metodo: over; |
| **Precondizione** | Stack: 7+11i, 8+11i, 99, 77i, 45i, 7+11i, 8+11i, 99, 77i, 45i, 7+11i, 8+11i, 99, 77i, 45i, 5.5 +7i, 66.01, 98.25+1.02i, 22-7i, 666.777i, 4.4+7i, 305.2i, 22i, 24.05i; |
| **Input** | StackOperation SO = new StackOperation(“over”, Stack);  ComplexNumber firstTop = Stack.peek();  SO.over();  ComplexNumber secondTop = Stack.pop();  ComplexNumber firstTop1 = Stack.pop();  ComplexNumber secondTop1 =Stack.pop(); |
| **Oracle** | expected == SyntaxError |

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| **UTC 2.5.3** | **Test StackOperation.over** |
| **Elementi testati** | Classe: StackOperation; Metodo: over; |
| **Precondizione** | Stack: 7+11i; |
| **Input** | StackOperation SO = new StackOperation(“over”, Stack);  ComplexNumber firstTop = Stack.peek();  SO.over();  ComplexNumber secondTop = Stack.pop();  ComplexNumber firstTop1 = Stack.pop();  ComplexNumber secondTop1 =Stack.pop(); |
| **Oracle** | expected == Error |

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| **UTC 2.5.4** | **Test StackOperation.over** |
| **Elementi testati** | Classe: StackOperation; Metodo: over; |
| **Precondizione** | Stack: ; |
| **Input** | StackOperation SO = new StackOperation(“over”, Stack);  ComplexNumber firstTop = Stack.peek();  SO.over();  ComplexNumber secondTop = Stack.pop();  ComplexNumber firstTop1 = Stack.pop();  ComplexNumber secondTop1 =Stack.pop();  boolean empty = stack.isEmpty(); |
| **Oracle** | empty == true; |