# ListStack 1

Looking at the Stack below; Follow the code executions and write in the current state of the List at Each state.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **State** | **Code** |  |  |  |  | |  |  |  |  |  | |  |  |
|  |  | **A** |  |  |  | |  |  |  |  |  | |  |  |
| **A** | ListStack stack = new ListStack() |  | isEmpty() | | | True | | |  | | |  | | |
|  |  |  |  | | |  | | |  | | |  | | |
|  | Push(45) |  | 45 |  | 34 | |  | 14 |  |  |  | |  |  |
|  | Push(34) | **B** | Ref | 🡺 | Ref | | 🡺 | Null |  |  |  | |  |  |
| **B** | Push(14) |  | isEmpty() | | | False | | |  | | |  | | |
|  |  |  |  | | |  | | |  | | |  | | |
|  | Pop() |  | 45 |  | 76 | |  |  |  |  |  | |  |  |
|  | Pop() | **C** | Ref |  | Null | |  |  |  |  |  | |  |  |
| **C** | Push(76) |  | isEmpty() | | | False | | |  | | |  | | |
|  |  |  |  | | |  | | |  | | |  | | |
|  | Push(14) |  | 45 |  | 76 | |  | 14 |  | 52 |  | | 68 |  |
|  | Push(52) | **D** | Ref |  | Ref | |  | Ref |  | Ref |  | | Null |  |
| **D** | Push(68) |  | isEmpty() | | | False | | |  | | |  | | |
|  |  |  |  | | |  | | |  | | |  | | |
|  | Pop() |  | 45 |  | 76 | |  |  |  |  |  | |  |  |
|  | Pop() | **E** | Ref |  | Null | |  |  |  |  |  | |  |  |
| **E** | Pop() |  | isEmpty() | | | False | | |  | | |  | | |
|  |  |  |  | | |  | | |  | | |  | | |
|  | Pop() |  |  |  |  | |  |  |  |  |  | |  |  |
| **F** | Pop() | **F** |  |  |  | |  |  |  |  |  | |  |  |
|  | Push(14) |  | isEmpty() | | | True | | |  | | |  | | |
|  |  |  |  | | |  | | |  | | |  | | |
|  | Push(96) |  | 14 |  | 96 | |  |  |  |  |  | |  |  |
|  | Push(67) | **G** | Ref |  | Null | |  |  |  |  |  | |  |  |
| **G** | Pop() |  | isEmpty() | | | False | | |  | | |  | | |
|  |  |  |  | | |  | | |  | | |  | | |
|  | Pop() |  | 14 |  | 92 | |  | 62 |  |  |  | |  |  |
|  | Push(92) | **H** | Ref |  | Ref | |  | Null |  |  |  | |  |  |
| **H** | Push(62) |  | isEmpty() | | | False | | |  | | |  | | |
|  |  |  |  | | |  | | |  | | |  | | |
|  | Pop() |  | 14 |  |  | |  |  |  |  |  | |  |  |
| **I** | Pop() | **I** | Null |  |  | |  |  |  |  |  | |  |  |
|  | Push(15) |  | isEmpty() | | | False | | |  | | |  | | |
|  |  |  |  | | |  | | |  | | |  | | |
|  |  |  | 14 |  | 15 | |  |  |  |  |  | |  |  |
|  |  | **J** | Ref |  | Null | |  |  |  |  |  | |  |  |
| **J** | Final |  | isEmpty() | | | False | | |  | | |  | | |