Results from runS which runs multiple programs and stacks at once. To run a single program and stack use run program stack.

```
*Main> runS st2 ex
 s:[] p: [LDI 3,DUP,ADD,LDI 5,SWAP] ==> A [6,5]

 s:[] p: [LDI 8,POP 1,LDI 3,DUP,POP 2,LDI 4] ==> A [4]

 s:[] p: [LDI 3,LDI 4,LDI 5,MULT,ADD] ==> A [23]

 s:[] p: [LDI 2,ADD] ==> RankError

 s:[] p: [DUP] ==> RankError

 s:[] p: [POP 4] ==> RankError

 s:[] p: [LDB True,IFELSE [ADD] [LDI 7],ADD] ==> RankError

 s:[] p: [LDB True,LDI 1,LDI 10,LDI 5,IFELSE [ADD] [LDI 7],ADD] ==> TypeError

 s:[] p: [LDI 20,LDI 1,LDI 10,LDI 5,LEQ,IFELSE [ADD] [LDI 7],DUP] ==> A [21,21]

 s:[] p: [LDB True,LDB False,MULT] ==> TypeError

 s:[] p: [LDI 10,DEC,DUP,DUP,DUP,POP 2] ==> A [9,9]

 s:[] p: [LDI 10,LDI 20,LEQ,DEC] ==> TypeError

 s:[] p: [LDI 10,LDI 5,LDB True,IFELSE [LDB True,IFELSE [ADD,DUP] [MULT]] [LDI 7]] ==> A [15,15]

 s:[] p: [LDI 10,LDI 5,LDB True,IFELSE [LDB False,IFELSE [ADD,DUP] [MULT]] [LDI 7]] ==> A [50]

 s:[] p: [LDI 10,LDI 5,LDB False,IFELSE [LDB True,IFELSE [ADD,DUP] [MULT]] [LDI 7]] ==> A [7,5,10]

 s:[] p: [LDI 10,LDI 5,LDB False,IFELSE [LDB True,IFELSE [ADD,ADD] [MULT]] [LDI 7]] ==> RankError
```

```
*Main> runS st ex
 s:[1] p: [LDI 3,DUP,ADD,LDI 5,SWAP] ==> A [6,5,1]

 s:[2] p: [LDI 8,POP 1,LDI 3,DUP,POP 2,LDI 4] ==> A [4,2]

 s:[1,3] p: [LDI 3,LDI 4,LDI 5,MULT,ADD] ==> A [23,1,3]

 s:[4] p: [LDI 2,ADD] ==> A [6]

 s:[2,4,7] p: [DUP] ==> A [2,2,4,7]

 s:[1,4,6] p: [POP 4] ==> RankError

 s:[10] p: [LDB True,IFELSE [ADD] [LDI 7],ADD] ==> RankError

 s:[100,6] p: [LDB True,LDI 1,LDI 10,LDI 5,IFELSE [ADD] [LDI 7],ADD] ==> TypeError

 s:[10,20,1] p: [LDI 20,LDI 1,LDI 10,LDI 5,LEQ,IFELSE [ADD] [LDI 7],DUP] ==> A [21,21,10,20,1]

 s:[3,8] p: [LDB True,LDB False,MULT] ==> TypeError

 s:[1,4,6] p: [LDI 10,DEC,DUP,DUP,DUP,POP 2] ==> A [9,9,1,4,6]

 s:[10] p: [LDI 10,LDI 20,LEQ,DEC] ==> TypeError

 s:[100,6] p: [LDI 10,LDI 5,LDB True,IFELSE [LDB True,IFELSE [ADD,DUP] [MULT]] [LDI 7]] ==> A [15,15,100,6]

 s:[10,20,1] p: [LDI 10,LDI 5,LDB True,IFELSE [LDB False,IFELSE [ADD,DUP] [MULT]] [LDI 7]] ==> A [50,10,20,1]

 s:[3,8] p: [LDI 10,LDI 5,LDB False,IFELSE [LDB True,IFELSE [ADD,DUP] [MULT]] [LDI 7]] ==> A [7,5,10,3,8]

 s:[3,8] p: [LDI 10,LDI 5,LDB False,IFELSE [LDB True,IFELSE [ADD,ADD] [MULT]] [LDI 7]] ==> A [7,5,10,3,8]
```

Below are the ranks of programs ran with an empty. You should be able to achieve these results using

rankP program 0

```
*Main> rankAllE
[LDI 3,DUP,ADD,LDI 5,SWAP] ==> Just 2

[LDI 8,POP 1,LDI 3,DUP,POP 2,LDI 4] ==> Just 1

[LDI 3,LDI 4,LDI 5,MULT,ADD] ==> Just 1

[LDI 2,ADD] ==> Nothing

[DUP] ==> Nothing

[POP 4] ==> Nothing

[LDB True,IFELSE [ADD] [LDI 7],ADD] ==> Nothing

[LDB True,LDI 1,LDI 10,LDI 5,IFELSE [ADD] [LDI 7],ADD] ==> Just 1

[LDI 20,LDI 1,LDI 10,LDI 5,LEQ,IFELSE [ADD] [LDI 7],DUP] ==> Just 2

[LDB True,LDB False,MULT] ==> Just 1

[LDI 10,DEC,DUP,DUP,DUP,POP 2] ==> Just 2

[LDI 10,LDI 20,LEQ,DEC] ==> Just 1

[LDI 10,LDI 5,LDB True,IFELSE [LDB True,IFELSE [ADD,DUP] [MULT]] [LDI 7]] ==> Just 1

[LDI 10,LDI 5,LDB True,IFELSE [LDB False,IFELSE [ADD,DUP] [MULT]] [LDI 7]] ==> Just 1

[LDI 10,LDI 5,LDB False,IFELSE [LDB True,IFELSE [ADD,DUP] [MULT]] [LDI 7]] ==> Just 1

[LDI 10,LDI 5,LDB False,IFELSE [LDB True,IFELSE [ADD,ADD] [MULT]] [LDI 7]] ==> Nothing
```