

Name: *Ben Puryear*

Assignment: 6

Correct and Complete: ..... 24 / 24

Evidence and Quality of Testing: 2 / 2

Clean Code: ..... 2 / 2

Writeup: ..... 2 / 2

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Total Score: ..... 30 / 30

Comments:

1. Good job!
2. Remove todos.

Test output:

```
1. RUNNING: ./vm_tests
[=====] Running 106 tests from 1 test suite.
[-----] Global test environment set-up.
[-----] 106 tests from BasicVMTest
[ RUN      ] BasicVMTest.SingleNOP
[      OK  ] BasicVMTest.SingleNOP (0 ms)
[ RUN      ] BasicVMTest.SingleWrite
[      OK  ] BasicVMTest.SingleWrite (0 ms)
[ RUN      ] BasicVMTest.SinglePop
[      OK  ] BasicVMTest.SinglePop (0 ms)
[ RUN      ] BasicVMTest.StoreAndLoad
[      OK  ] BasicVMTest.StoreAndLoad (0 ms)
[ RUN      ] BasicVMTest.Dup
[      OK  ] BasicVMTest.Dup (0 ms)
[ RUN      ] BasicVMTest.IntAdd
[      OK  ] BasicVMTest.IntAdd (0 ms)
[ RUN      ] BasicVMTest.DoubleAdd
[      OK  ] BasicVMTest.DoubleAdd (0 ms)
[ RUN      ] BasicVMTest.NullAddFirstOperand
[      OK  ] BasicVMTest.NullAddFirstOperand (0 ms)
[ RUN      ] BasicVMTest.NullAddSecondOperand
[      OK  ] BasicVMTest.NullAddSecondOperand (0 ms)
[ RUN      ] BasicVMTest.IntSub
[      OK  ] BasicVMTest.IntSub (0 ms)
[ RUN      ] BasicVMTest.DoubleSub
[      OK  ] BasicVMTest.DoubleSub (0 ms)
[ RUN      ] BasicVMTest.NullSubFirstOperand
[      OK  ] BasicVMTest.NullSubFirstOperand (0 ms)
[ RUN      ] BasicVMTest.NullSubSecondOperand
[      OK  ] BasicVMTest.NullSubSecondOperand (0 ms)
[ RUN      ] BasicVMTest.IntMul
[      OK  ] BasicVMTest.IntMul (0 ms)
[ RUN      ] BasicVMTest.DoubleMul
[      OK  ] BasicVMTest.DoubleMul (0 ms)
[ RUN      ] BasicVMTest.NullMulFirstOperand
[      OK  ] BasicVMTest.NullMulFirstOperand (0 ms)
```

```
[ RUN      ] BasicVMTest.NullMulSecondOperand
[ OK ] BasicVMTest.NullMulSecondOperand (0 ms)
[ RUN      ] BasicVMTest.IntDiv
[ OK ] BasicVMTest.IntDiv (0 ms)
[ RUN      ] BasicVMTest.DoubleDiv
[ OK ] BasicVMTest.DoubleDiv (0 ms)
[ RUN      ] BasicVMTest.NullDivFirstOperand
[ OK ] BasicVMTest.NullDivFirstOperand (0 ms)
[ RUN      ] BasicVMTest.NullDivSecondOperand
[ OK ] BasicVMTest.NullDivSecondOperand (0 ms)
[ RUN      ] BasicVMTest.And
[ OK ] BasicVMTest.And (0 ms)
[ RUN      ] BasicVMTest.NullAndFirstOperand
[ OK ] BasicVMTest.NullAndFirstOperand (0 ms)
[ RUN      ] BasicVMTest.NullAndSecondOperand
[ OK ] BasicVMTest.NullAndSecondOperand (0 ms)
[ RUN      ] BasicVMTest.Or
[ OK ] BasicVMTest.Or (0 ms)
[ RUN      ] BasicVMTest.NullOrFirstOperand
[ OK ] BasicVMTest.NullOrFirstOperand (0 ms)
[ RUN      ] BasicVMTest.NullOrSecondOperand
[ OK ] BasicVMTest.NullOrSecondOperand (0 ms)
[ RUN      ] BasicVMTest.Not
[ OK ] BasicVMTest.Not (0 ms)
[ RUN      ] BasicVMTest.NullNot
[ OK ] BasicVMTest.NullNot (0 ms)
[ RUN      ] BasicVMTest.IntLessThan
[ OK ] BasicVMTest.IntLessThan (0 ms)
[ RUN      ] BasicVMTest.DoubleLessThan
[ OK ] BasicVMTest.DoubleLessThan (0 ms)
[ RUN      ] BasicVMTest.StringLessThan
[ OK ] BasicVMTest.StringLessThan (0 ms)
[ RUN      ] BasicVMTest.NullLessThanFirstOperand
[ OK ] BasicVMTest.NullLessThanFirstOperand (0 ms)
[ RUN      ] BasicVMTest.NullLessThanSecondOperand
[ OK ] BasicVMTest.NullLessThanSecondOperand (0 ms)
[ RUN      ] BasicVMTest.IntLessEqual
[ OK ] BasicVMTest.IntLessEqual (0 ms)
[ RUN      ] BasicVMTest.DoubleLessEqual
[ OK ] BasicVMTest.DoubleLessEqual (0 ms)
[ RUN      ] BasicVMTest.StringLessEqual
[ OK ] BasicVMTest.StringLessEqual (0 ms)
[ RUN      ] BasicVMTest.NullLessEqualFirstOperand
[ OK ] BasicVMTest.NullLessEqualFirstOperand (0 ms)
[ RUN      ] BasicVMTest.NullLessEqualSecondOperand
[ OK ] BasicVMTest.NullLessEqualSecondOperand (0 ms)
[ RUN      ] BasicVMTest.IntGreaterThan
[ OK ] BasicVMTest.IntGreaterThan (0 ms)
[ RUN      ] BasicVMTest.DoubleGreaterThan
[ OK ] BasicVMTest.DoubleGreaterThan (0 ms)
[ RUN      ] BasicVMTest.StringGreaterThan
[ OK ] BasicVMTest.StringGreaterThan (0 ms)
[ RUN      ] BasicVMTest.NullGreaterThanFirstOperand
[ OK ] BasicVMTest.NullGreaterThanFirstOperand (0 ms)
[ RUN      ] BasicVMTest.NullGreatThanSecondOperand
[ OK ] BasicVMTest.NullGreatThanSecondOperand (0 ms)
[ RUN      ] BasicVMTest.IntGreaterEqual
[ OK ] BasicVMTest.IntGreaterEqual (0 ms)
[ RUN      ] BasicVMTest.DoubleGreaterEqual
[ OK ] BasicVMTest.DoubleGreaterEqual (0 ms)
[ RUN      ] BasicVMTest.StringGreaterEqual
[ OK ] BasicVMTest.StringGreaterEqual (0 ms)
```

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[ RUN      ] BasicVMTest.NullGreaterEqualFirstOperand
[ OK ] BasicVMTest.NullGreaterEqualFirstOperand (0 ms)
[ RUN      ] BasicVMTest.NullGreatEqualSecondOperand
[ OK ] BasicVMTest.NullGreatEqualSecondOperand (0 ms)
[ RUN      ] BasicVMTest.NullEqual
[ OK ] BasicVMTest.NullEqual (0 ms)
[ RUN      ] BasicVMTest.IntEqual
[ OK ] BasicVMTest.IntEqual (0 ms)
[ RUN      ] BasicVMTest.DoubleEqual
[ OK ] BasicVMTest.DoubleEqual (0 ms)
[ RUN      ] BasicVMTest.StringEqual
[ OK ] BasicVMTest.StringEqual (0 ms)
[ RUN      ] BasicVMTest.BoolEqual
[ OK ] BasicVMTest.BoolEqual (0 ms)
[ RUN      ] BasicVMTest.NullNotEqual
[ OK ] BasicVMTest.NullNotEqual (0 ms)
[ RUN      ] BasicVMTest.IntNotEqual
[ OK ] BasicVMTest.IntNotEqual (0 ms)
[ RUN      ] BasicVMTest.DoubleNotEqual
[ OK ] BasicVMTest.DoubleNotEqual (0 ms)
[ RUN      ] BasicVMTest.StringNotEqual
[ OK ] BasicVMTest.StringNotEqual (0 ms)
[ RUN      ] BasicVMTest.BoolNotEqual
[ OK ] BasicVMTest.BoolNotEqual (0 ms)
[ RUN      ] BasicVMTest.JumpForward
[ OK ] BasicVMTest.JumpForward (0 ms)
[ RUN      ] BasicVMTest.JumpFalseForward
[ OK ] BasicVMTest.JumpFalseForward (0 ms)
[ RUN      ] BasicVMTest.JumpFalseNoJump
[ OK ] BasicVMTest.JumpFalseNoJump (0 ms)
[ RUN      ] BasicVMTest.JumpBackwards
[ OK ] BasicVMTest.JumpBackwards (0 ms)
[ RUN      ] BasicVMTest.FunctionReturnsConst
[ OK ] BasicVMTest.FunctionReturnsConst (0 ms)
[ RUN      ] BasicVMTest.FunctionReturnsModifiedParam
[ OK ] BasicVMTest.FunctionReturnsModifiedParam (0 ms)
[ RUN      ] BasicVMTest.FunctionWithTwoParamatersSubtracted
[ OK ] BasicVMTest.FunctionWithTwoParamatersSubtracted (0 ms)
[ RUN      ] BasicVMTest.FunctionWithParamatersPrinted
[ OK ] BasicVMTest.FunctionWithParamatersPrinted (0 ms)
[ RUN      ] BasicVMTest.RecursiveSumFunction
[ OK ] BasicVMTest.RecursiveSumFunction (0 ms)
[ RUN      ] BasicVMTest.BasicNoFieldStructAlloc
[ OK ] BasicVMTest.BasicNoFieldStructAlloc (0 ms)
[ RUN      ] BasicVMTest.OneFieldStructAlloc
[ OK ] BasicVMTest.OneFieldStructAlloc (0 ms)
[ RUN      ] BasicVMTest.OneFieldTwoStructAlloc
[ OK ] BasicVMTest.OneFieldTwoStructAlloc (0 ms)
[ RUN      ] BasicVMTest.TwoFieldsOneStructAlloc
[ OK ] BasicVMTest.TwoFieldsOneStructAlloc (0 ms)
[ RUN      ] BasicVMTest.NullObjectFieldAccess
[ OK ] BasicVMTest.NullObjectFieldAccess (0 ms)
[ RUN      ] BasicVMTest.NullObjectAddField
[ OK ] BasicVMTest.NullObjectAddField (0 ms)
[ RUN      ] BasicVMTest.NullObjectFieldSet
[ OK ] BasicVMTest.NullObjectFieldSet (0 ms)
[ RUN      ] BasicVMTest.BasicArrayAlloc
[ OK ] BasicVMTest.BasicArrayAlloc (0 ms)
[ RUN      ] BasicVMTest.BasicArrayIndexAccess
[ OK ] BasicVMTest.BasicArrayIndexAccess (0 ms)
[ RUN      ] BasicVMTest.BasicArrayIndexUpdate
[ OK ] BasicVMTest.BasicArrayIndexUpdate (0 ms)

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[ RUN      ] BasicVMTest.LoopWithDifferentIndexUpdates
[ OK      ] BasicVMTest.LoopWithDifferentIndexUpdates (0 ms)
[ RUN      ] BasicVMTest.TooLargeArraySetIndex
[ OK      ] BasicVMTest.TooLargeArraySetIndex (0 ms)
[ RUN      ] BasicVMTest.TooSmallArraySetIndex
[ OK      ] BasicVMTest.TooSmallArraySetIndex (0 ms)
[ RUN      ] BasicVMTest.NullArraySetIndex
[ OK      ] BasicVMTest.NullArraySetIndex (0 ms)
[ RUN      ] BasicVMTest.TooLargeArrayGetIndex
[ OK      ] BasicVMTest.TooLargeArrayGetIndex (0 ms)
[ RUN      ] BasicVMTest.TooSmallArrayGetIndex
[ OK      ] BasicVMTest.TooSmallArrayGetIndex (0 ms)
[ RUN      ] BasicVMTest.NullArrayGetIndex
[ OK      ] BasicVMTest.NullArrayGetIndex (0 ms)
[ RUN      ] BasicVMTest.StringLength
[ OK      ] BasicVMTest.StringLength (0 ms)
[ RUN      ] BasicVMTest.NullStringLength
[ OK      ] BasicVMTest.NullStringLength (0 ms)
[ RUN      ] BasicVMTest.ArrayLength
[ OK      ] BasicVMTest.ArrayLength (0 ms)
[ RUN      ] BasicVMTest.NullArrayLength
[ OK      ] BasicVMTest.NullArrayLength (0 ms)
[ RUN      ] BasicVMTest.GetCharacterFromString
[ OK      ] BasicVMTest.GetCharacterFromString (0 ms)
[ RUN      ] BasicVMTest.NullIndexInGetCharacterFromString
[ OK      ] BasicVMTest.NullIndexInGetCharacterFromString (0 ms)
[ RUN      ] BasicVMTest.NullStringInGetCharacterFromString
[ OK      ] BasicVMTest.NullStringInGetCharacterFromString (0 ms)
[ RUN      ] BasicVMTest.TooLargeGetCharacterFromString
[ OK      ] BasicVMTest.TooLargeGetCharacterFromString (0 ms)
[ RUN      ] BasicVMTest.TooSmallGetCharacterFromString
[ OK      ] BasicVMTest.TooSmallGetCharacterFromString (0 ms)
[ RUN      ] BasicVMTest.ToIntFromDouble
[ OK      ] BasicVMTest.ToIntFromDouble (0 ms)
[ RUN      ] BasicVMTest.ToIntFromString
[ OK      ] BasicVMTest.ToIntFromString (0 ms)
[ RUN      ] BasicVMTest.BadToIntFromString
[ OK      ] BasicVMTest.BadToIntFromString (0 ms)
[ RUN      ] BasicVMTest.ToDoubleFromInt
[ OK      ] BasicVMTest.ToDoubleFromInt (0 ms)
[ RUN      ] BasicVMTest.ToDoubleFromString
[ OK      ] BasicVMTest.ToDoubleFromString (0 ms)
[ RUN      ] BasicVMTest.BadToDoubleFromString
[ OK      ] BasicVMTest.BadToDoubleFromString (0 ms)
[ RUN      ] BasicVMTest.NullToInt
[ OK      ] BasicVMTest.NullToInt (0 ms)
[ RUN      ] BasicVMTest.NullToDb1
[ OK      ] BasicVMTest.NullToDb1 (0 ms)
[ RUN      ] BasicVMTest.NullToStr
[ OK      ] BasicVMTest.NullToStr (0 ms)
[ RUN      ] BasicVMTest.ConcatStrings
[ OK      ] BasicVMTest.ConcatStrings (0 ms)
[ RUN      ] BasicVMTest.NullConcatFirstOperand
[ OK      ] BasicVMTest.NullConcatFirstOperand (0 ms)
[ RUN      ] BasicVMTest.NullConcatSecondOperand
[ OK      ] BasicVMTest.NullConcatSecondOperand (0 ms)
[-----] 106 tests from BasicVMTest (7 ms total)

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[-----] Global test environment tear-down
[=====] 106 tests from 1 test suite ran. (7 ms total)
[ PASSED ] 106 tests.

```

2. RUNNING: ./hw6 <<< 6 <<< 4 <<< 1

Please enter integer values to sum (prime number to quit)

>> Enter an int: >> Enter an int: >> Enter an int: The sum is: 10

Goodbye!

3. RUNNING: ./hw6 <<< 10 <<< 8 <<< 4 <<< 1

Please enter integer values to sum (prime number to quit)

>> Enter an int: >> Enter an int: >> Enter an int: >> Enter an int: The sum is: 22

Goodbye!