

Unit 14 - Week 12

Course outline

How does an NPTEL online course work?

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Week 12

Jack Compiler: Code Generation - 5

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Understand the Operating System - Compiler Interactions

Project - 12: One sample journey from Jack to Hack

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Assignment 12

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2020-04-22, 23:59 IST.

1) What is the *minimum* number of labels needed in compiling an IfStatement into VM commands?

No, the answer is incorrect.
Score: 0

Accepted Answers:
(Type: Numeric) 2

1 point

2) Which of the following token(s) cannot be parsed inside the compileTerm() routine?

- identifier
- integer constant
- string constant
- semicolon(;

No, the answer is incorrect.
Score: 0

Accepted Answers:
semicolon(;

1 point

3) Given the following JACK code snippet, according to the order in which JACK compiler handles expressions, what will be the output?

```
let a = 2 + 4 * 3;
do Output.printInt(a);
```

No, the answer is incorrect.
Score: 0

Accepted Answers:
(Type: Numeric) 18

1 point

4) Which of the following classes is not a part of the JACK OS standard library?

- Keyboard
- Mouse
- Math
- Memory

No, the answer is incorrect.
Score: 0

Accepted Answers:
Mouse

1 point

5) Memory leak arises because of which of the following?

- Allocating a very large array, say of size 1000
- If the size of the code is too big.
- Program not releasing the memory back to the OS, after initially requesting some memory
- None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
Program not releasing the memory back to the OS, after initially requesting some memory

1 point

6) Inside which of the following functions can a compileIfStatement() be invoked recursively?

- compileLetStatement
- compileIfStatement
- compileDoStatement
- compileWhileStatement

No, the answer is incorrect.
Score: 0

Accepted Answers:
compileIfStatement
compileWhileStatement

1 point

7) The number of arguments of a subroutine, added at the last of the call command in VM, depends on which of the following?

- return value of compileExpressionList()
- Number of field variables in the class of the called subroutine
- Number of field variables in the class of the subroutine from which call is made
- type of subroutine - function or method

No, the answer is incorrect.
Score: 0

Accepted Answers:
return value of compileExpressionList()
type of subroutine - function or method

1 point

8) Which of the following statement(s) is FALSE about static linking?

- Large code size
- Memory leaks happen only because of static linking
- The entire VM code of the OS has to be present during compilation
- If we add a new class to the OS, already compiled programs need not be recompiled.

No, the answer is incorrect.
Score: 0

Accepted Answers:
Memory leaks happen only because of static linking
If we add a new class to the OS, already compiled programs need not be recompiled.

1 point

9) In which of the following ways is dynamic linking better than static linking?

- Memory footprint
- Execution time
- Backward Compatibility
- Intervention from the OS

No, the answer is incorrect.
Score: 0

Accepted Answers:
Memory footprint

1 point

10) When a new object is allocated, which of the following ways is used to find the size of memory to be allocated?

- Local symbol table of the current subroutine
- Class symbol table of class in which current subroutine is present
- Class symbol table of class whose object is being created
- Local symbol table of constructor of the class whose object is being created

No, the answer is incorrect.
Score: 0

Accepted Answers:
Class symbol table of class whose object is being created

1 point