

Commencé le	lundi 19 octobre 2020, 15:42
État	Terminé
Terminé le	lundi 19 octobre 2020, 15:59
Temps mis	17 min 39 s
Note	8,00 sur 10,00 (80%)

Question **1**

Correct

Note de 1,00 sur 1,00

A compiler is composed of three parts, in which order are they executed?

Veuillez choisir une réponse :

☐

a. Back-end, Front-end, Middle-end

☐

b. Front-end, Middle-end, Backward-end

☒

c. Front-end, Middle-end, Back-end ✓

Votre réponse est correcte.

La réponse correcte est : Front-end, Middle-end, Back-end

Question **2**

Incorrect

Note de 0,00 sur 1,00

What means regex?

Veuillez choisir une réponse :

☐

a. Regexp

☐

b. Rectangular expression

☒

c. Regular impression ✗

☐

d. Regular expression

Votre réponse est incorrecte.

La réponse correcte est : Regular expression

Question **3**

Correct

Note de 1,00 sur 1,00

What means "(x){0,4}" in a regex?

Veuillez choisir une réponse :

☐

a. Capture anything that has a value between 0 and 4.

☐

b. Capture anything that has a length between 0 and 4.

☐

c. Capture consecutive list of 0 and 4 x, excluding empty set.

☒

d. Capture consecutive list of 0 and 4 x, including empty set. ✓

Votre réponse est correcte.

La réponse correcte est : Capture consecutive list of 0 and 4 x, including empty set.



Question **4**

Correct

Note de 1,00 sur  
1,00

What is "Constant propagation"?

Veuillez choisir une réponse :

- ☐ a. A mechanism to remove constants.
- ☐ b. An optimization to transform all expressions into constant ones.
- ☒ c. An optimization to compute at compile time. ✓

Votre réponse est correcte.

La réponse correcte est : An optimization to compute at compile time.

Question **5**

Correct

Note de 1,00 sur  
1,00

Why is it interesting to remove unused variables and to do it in the optimization stage?

Veuillez choisir une réponse :

- ☒ a. This will also remove the related instructions, and thus improve performance. ✓
- ☐ b. This will also remove the related instructions, and make the compilation front end much faster.
- ☐ c. This will reduce the compiler work.

Votre réponse est correcte.

La réponse correcte est : This will also remove the related instructions, and thus improve performance.

Question **6**

Correct

Note de 1,00 sur  
1,00

Why is "register allocation" a hard problem?

Veuillez choisir une réponse :

- ☐ a. Because there are too many registers.
- ☐ b. Because some registers are faster than some others.
- ☒ c. Because the number of registers is limited. ✓

Votre réponse est correcte.

La réponse correcte est : Because the number of registers is limited.

Question **7**

Incorrect

Note de 0,00 sur  
1,00

How many instructions are needed (at least) to have the following code to work:

`int i = 10;``int j = i*i;``// Later use j`

Veuillez choisir une réponse :

- ☐ a. 2
- ☒ b. 1 ✗
- ☐ c. 0 (j is known at compile time)

Votre réponse est incorrecte.

La réponse correcte est : 0 (j is known at compile time)



Question **8**

Correct

Note de 1,00 sur  
1,00

What is the difference between a compiler and an interpreter?

Veuillez choisir une réponse :

- ☐ a. A compiler returns the results and an interpreter interprets the source code
- ☐ b. There is no difference between a compiler and an interpreter
- ☒ c. A compiler transforms from one language to another and the interpreter transforms a source code into results ✓
- ☐ d. A compiler transforms a source code into an interpreter that transforms a source code into results

Votre réponse est correcte.

La réponse correcte est : A compiler transforms from one language to another and the interpreter transforms a source code into results

Question **9**

Correct

Note de 1,00 sur  
1,00

What is a dynamic library?

Veuillez choisir une réponse :

- ☐ a. A library that can change its content during execution
- ☒ b. A library that is found and used during execution ✓
- ☐ c. A library that has been written dynamically

Votre réponse est correcte.

La réponse correcte est : A library that is found and used during execution

Question **10**

Correct

Note de 1,00 sur  
1,00

What is a grammar and why we need it in compilation?

Veuillez choisir une réponse :

- ☐ a. A grammar is a set of regular expressions and allows to know if the compiler speaks a good language
- ☒ b. A grammar is a set of rules to define the syntax of a language and thus the compiler needs it to ensure the source code respect the language ✓
- ☐ c. A grammar is a set of rules that the compiler used in the lexical analysis to ensure the source code is correct.

Votre réponse est correcte.

La réponse correcte est : A grammar is a set of rules to define the syntax of a language and thus the compiler needs it to ensure the source code respect the language

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