

Read the lecture materials to thoroughly & accurately answer the following questions.

1. How is `new` used in C++ and what does it do?

2. What is the difference between the statements

```
int *pAge;  
int *pAge = new int;  
int *pAge = 0;
```

3. Does C++ include automatic garbage collection?

4. How is `delete` used in C++ and what does it do?

5. What is a memory leak and why is it bad?

6. What is particularly dangerous about using `delete` with the same pointer two times? What can be done to avoid this problem?