Random Number Generation

- rand(): outputs non-negative random number

```
#include <iostream>
#include <ctime> // time
#include <cstdlib> // srand, rand
#include <climits> // INT_MAX

using namespace std;

int main() {
    cout << rand() << endl;
    cout << rand() << endl;
    cout << rand() << endl;
    return 0;
}
```

- If the seed value is not changed, the random sequence is always the same

```cpp
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#include <ctime> // time
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    cout << rand() << endl;
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```

- By setting the seed to the current time, different random sequences can be obtained for each run

```cpp
#include <iostream>
#include <ctime> // time
#include <cstdlib> // srand, rand
#include <climits> // INT_MAX

using namespace std;

int main() {
    srand(time(0));
    cout << rand() << endl;
    cout << rand() << endl;
    cout << rand() << endl;
    return 0;
}
```