計算機概論與程式設計

LAB 9
2022/11/28
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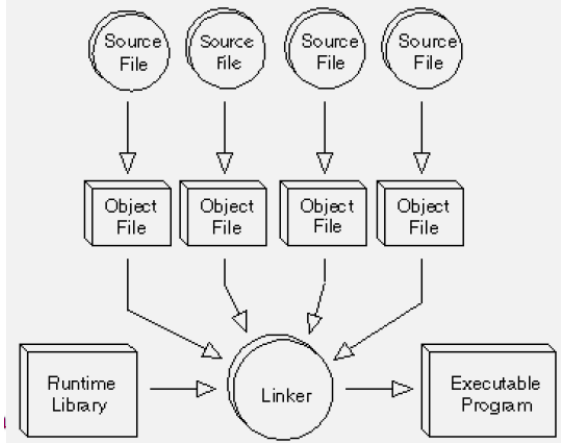
Target

- Familiar with compile flow
  - main.c => main.o
  - Link a.o / b.o / c.o to executable program
- Question
  - If main.c call A_FUNC()
  - But A_FUNC is implemented in a.cpp
- Solution
  - From previous class, you can simply type
    - gcc main.c a.c –o q1
  - In fact
    - main.c => main.o and a.c => a.o
    - Link main.o + a.o => Your executable program

main.c

```
1  #include "a.h"
```



If a.o also not contain A_FUNC()?

```
:main.c:(.text+0x7f): undefined reference to `A_FUNC'
```

Could we directly use
gcc main.c a.o –o q1?
gcc main.o a.o –o q1?

Lab 9

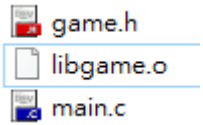
- Find treasure from TA’s pre-compiled object file
  - TA will offer libgame.o and template src code from E3
  - Please use Windows environment to do Lab 9

- You don't need to implement the following APIs, we have prepared them in libgame.o, you just need to embed libgame.o into your program according to your way.

```c
int main(int argc, char **argv)
{
    //Get question by this API
    get_question_from_TA(...);

    //Fill your answer to array, and call this API to get password
    get_password_by_answer(...);

    //Using password to get treasure
    get_treasure_by_password(...);
```



Hint

- You might get some debug information when you use wrong method
  - When calling get_question_from_TA() with wrong method

```
PS C:\Users\Max\Desktop\lab9_t> ./main
[get_question_from_TA]: Please give me an array size greater than 200
[get_question_from_TA]: Exit game now
```

  - When calling get_question_from_TA() with correct method

```
PS C:\Users\Max\Desktop\lab9_t> ./main
[get_question_from_TA]: Already give you question in your array, you can check it now.
```

  - And then, you can check question and answer to get_password_by_answer()

Grading

- When you get treasure from get_treasure_by_password(), you can show your screen to TAs (70%)

- Explain all the steps you did from source code (30%)
  - Each step is 10%
  - If you just get password from any other method and finish lab 9 directly
    - You will lose 30% of scores

- Total: 100%