

Eclipse Project Management

Last updated 11/2/22

These slides introduce multiple files in a project and multiple projects in Eclipse

Eclipse Project Management

- Multiple files in a project
 - There can be more than one .c file or .h file in a project
 - There can only be one **included** file in a project with a **main()** function
 - Eclipse searches the project looking for **main()**
 - If it finds more than one, it does not know what to do

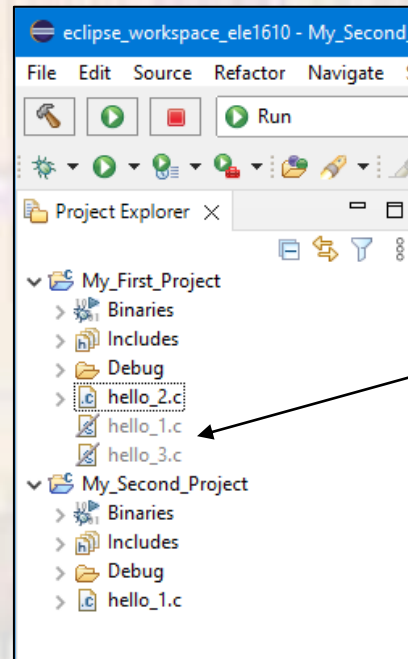
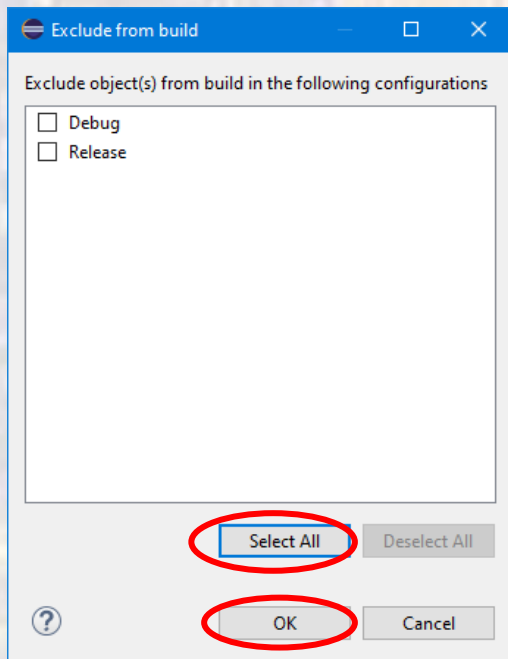
```
eclipse_workspace_ele1610 - My_Second_Project/hello_1.c - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Run My_First_Project.exe
CDT Build Console [My_First_Project]
16:53:43 **** Incremental Build of configuration Debug for project My_First_Project ****
Info: Internal Builder is used for build
gcc -O0 -g3 -Wall -c -fmessage-length=0 -o hello_2.o "..\\hello_2.c"
gcc -O0 -g3 -Wall -c -fmessage-length=0 -o hello_1.o "..\\hello_1.c"
gcc -O0 -g3 -Wall -c -fmessage-length=0 -o hello_3.o "..\\hello_3.c"
gcc -o My_First_Project.exe hello_1.o hello_2.o hello_3.o
hello_2.o: In function `main':
Z:\msoe_current\24_S1_ELE1610\eclipse_workspace_ele1610\My_First_Project\Debug\..\hello_2.c:17: multiple definition of `main'
hello_1.o:Z:\msoe_current\24_S1_ELE1610\eclipse_workspace_ele1610\My_First_Project\Debug\..\hello_1.c:17: first defined here
hello_3.o: In function `main':
Z:\msoe_current\24_S1_ELE1610\eclipse_workspace_ele1610\My_First_Project\Debug\..\hello_3.c:17: multiple definition of `main'
hello_1.o:Z:\msoe_current\24_S1_ELE1610\eclipse_workspace_ele1610\My_First_Project\Debug\..\hello_1.c:17: first defined here
collect2.exe: error: ld returned 1 exit status

16:53:44 Build Failed. 4 errors, 0 warnings. (took 940ms)
```

Typical error due to more than 1 main function

Eclipse Project Management

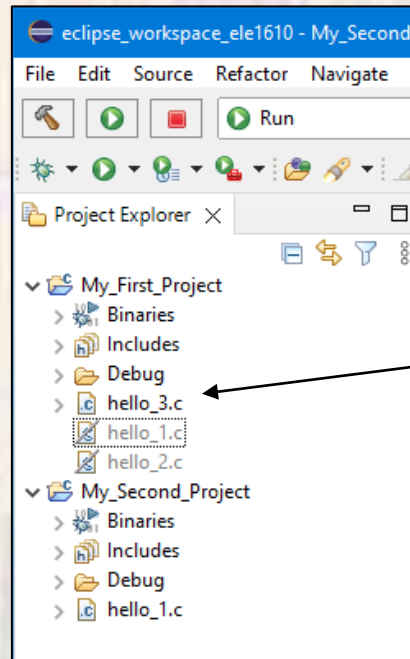
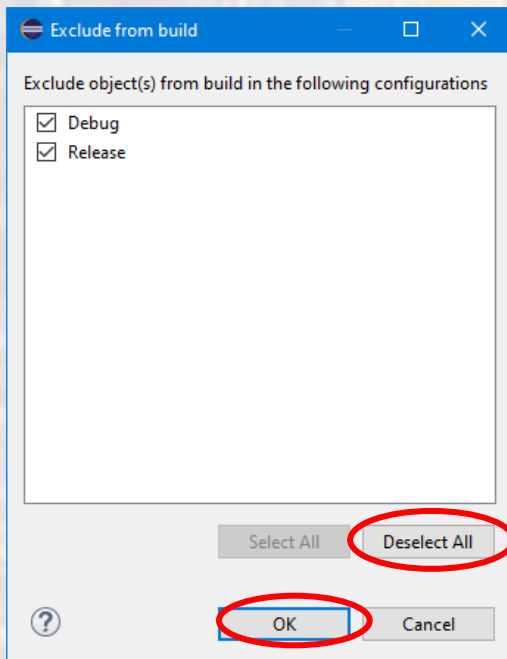
- Multiple files in a project
 - To **exclude** a file from the project search process
 - **rt-click** on the file and select
Resource Configurations → Exclude from Build
Select All → OK



Excluded files are greyed out and have a strike through

Eclipse Project Management

- Multiple files in a project
 - To **include** a file in the project search process
 - **rt-click** on the file and select
Resource Configurations → Exclude from Build
Deselect All → OK



Included files are not greyed out

Eclipse Project Management

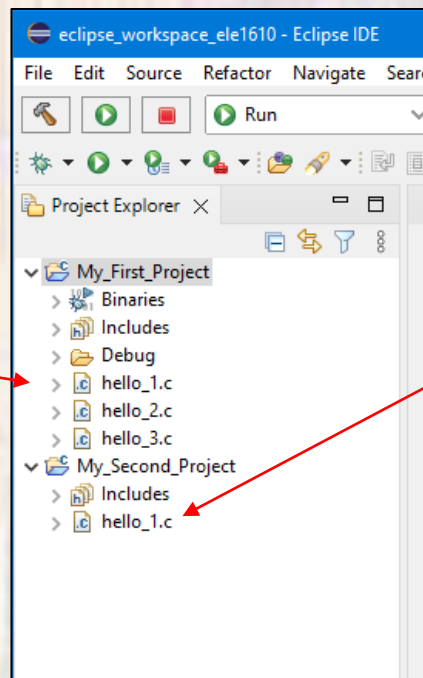
- Multiple Projects
 - You can create as many projects in your Eclipse-Class-Workspace as you want
 - Projects should be separate when they have separate purposes
 - HW3_Project – holds files for 2 programs for HW 3
 - Piano_Project – holds files for a piano playing project
 - Eclipse uses the concept of the “current” project
 - What files are built (compiled)
 - What files are run on your computer

Eclipse Project Management

- Multiple Projects

- This workspace has 2 projects
 - My_First_Project with 3 code files: hello_1.c, hello_2.c, hello_3.c
 - My_Second_Project with 1 code file: hello_1.c
- There is no connection/confusion between the two hello_1.c files because they are in different projects

```
hello_1.c x
1  /*
2  * hello_1.c
3  *
4  * Created on: Jul 21, 2022
5  * Author: johnsontimoj
6  */
7  ////////////////////////////////////////////////////
8  //
9  // Hello code to show project management utilities
10 //
11 // inputs - none
12 // outputs - print statements
13 //
14 ////////////////////////////////////////////////////
15 #include <stdio.h>
16
17 int main(void){
18     setbuf(stdout, NULL); // fix for Eclipse/Windows printing
19
20     // simple program to print a greeting
21     printf("Hello ELE1610 from hello_1.c");
22
23     return 0;
24 }// end main
```

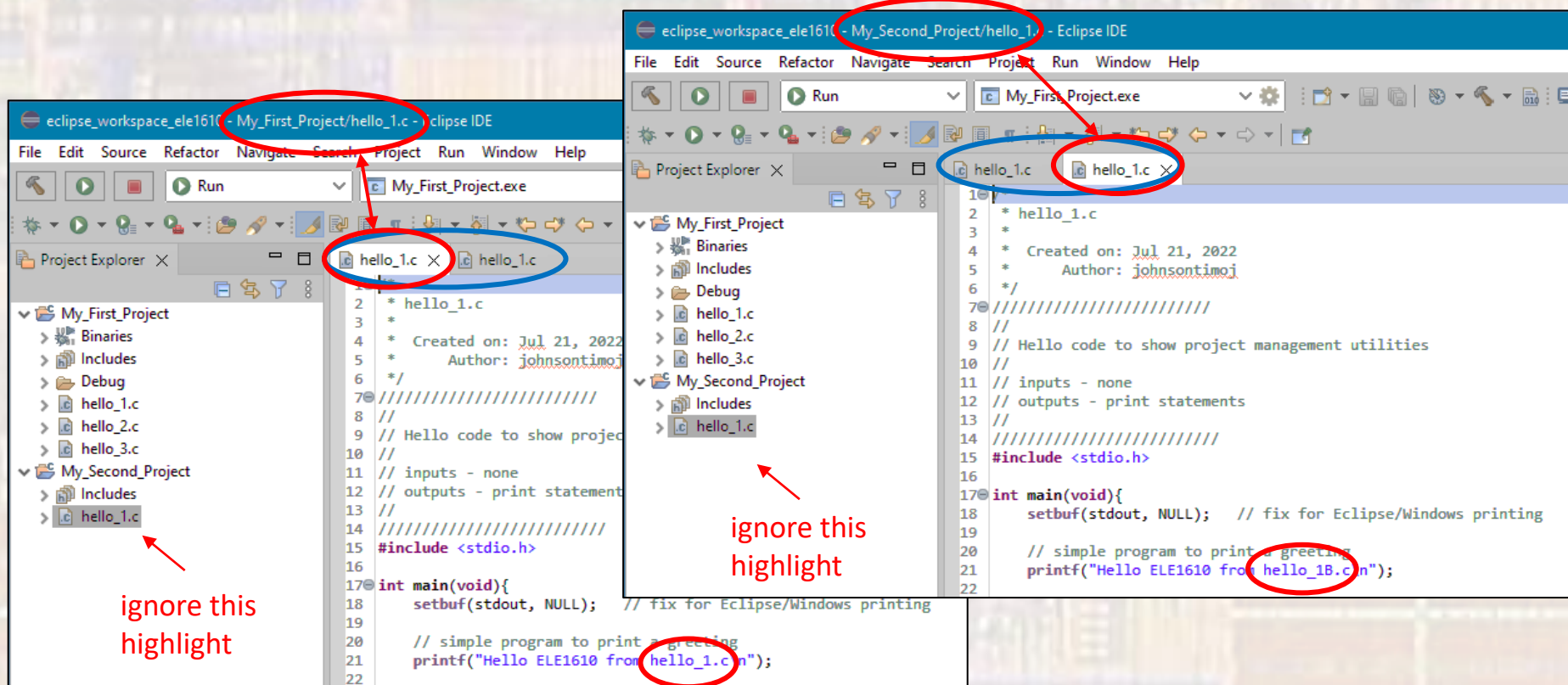


```
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14 ////////////////////////////////////////////////////
15 #include <stdio.h>
16
17 int main(void){
18     setbuf(stdout, NULL); // fix for Eclipse/Windows printing
19
20     // simple program to print a greeting
21     printf("Hello ELE1610 from hello_1B.c");
22
23     return 0;
24 }// end main
25
```

Eclipse Project Management

- Multiple Projects

- You can have files open from multiple projects
- To know which project a file comes from check the window header or close it and re-open from the Project Explorer list



Eclipse Project Management

- Multiple Projects

- Eclipse uses the “current” project in many of the icon shortcuts
- This can cause **significant confusion** when you have multiple projects in your workspace
- The **only safe approach** is to highlight the project or file and **rt-click** - then select the desired task

