



Homework #5 Retrospect

- Most changes were to View and Controller
 - View was restructured to return user responses from dialogs rather than simply printing text
 - Controller
- Main initialized Gtk
- Slight change to `Publication::to_string()` to better fit within the dialog

Full Credit Changes to view.h

Homework #4

```
class View {  
    public:  
        View(Library& lib);  
        void show_menu();  
        void list_publications();  
        void list_patrons();  
        void help();  
    private:  
        Library& library;  
};
```

Homework #5

```
class View {  
    public:  
        View(Library& lib);  
        int select_from_menu();  
        void list_publications();  
        int select_publication();  
        void list_patrons();  
        int select_patron();  
        int select_genre();  
        int select_age();  
        int select_media();  
        void help();  
    private:  
        string get_publications();  
        string get_patrons();  
        Library& library;  
};
```

Full Credit view.cpp Selected Code

```
int View::select_from_menu() {
    string menu = R"( ... )";
    string result = Dialogs::input(menu, "Main Menu");
    try {
        return (result == "CANCEL") ? 0 : stoi(result);
    } catch (...) {
        return -1;
    }
}
```

```
string View::get_publications() {
    string publications = "";
    for (int i=0; i<library.number_of_publications(); ++i) {
        publications += to_string(i) + ") " + library.publication_to_string(i) + '\n';
    }
    return publications;
}

void View::list_publications() {
    Dialogs::message(get_publications(), "List of Library Publications");
}

int View::select_publication() {
    string result = Dialogs::input(get_publications(), "Select a Publication");
    try {
        return (result == "CANCEL") ? -1 : stoi(result);
    } catch (...) {
        Dialogs::message("Invalid entry - please type an integer");
    }
}
```


Full Credit

controller.cpp

Selected Code

```
void Controller::execute_cmd(int cmd) {
    if (cmd == 1) { // Add publication
        string title, author, copyright, isbn;
        int genre, media, age;
        bool cancel = false;

        title = Dialogs::input("Title?");
        if (title == "CANCEL") cancel = true;

        if (!cancel) author = Dialogs::input("Author?");
        if (author == "CANCEL") cancel = true;

        if (!cancel) copyright = Dialogs::input("Copyright date?");
        if (copyright == "CANCEL") cancel = true;

        if (!cancel) genre = view.select_genre();
        if (genre < 0) cancel = true;

        if (!cancel) media = view.select_media();
        if (media < 0) cancel = true;

        if (!cancel) age = view.select_age();
        if (age < 0) cancel = true;

        if (!cancel) isbn = Dialogs::input("ISBN?");
        if (isbn == "CANCEL") cancel = true;

        if (!cancel) library.add_publication(
            Publication(title, author, copyright, genre, media, age, isbn));
    }
}
```

No changes to
controller.h

Bonus

Changes to view.cpp

Full Credit

```
int View::select_from_menu() {
    string menu = R"(
=====
CSE1325 Library Management System
=====

Publications
-----
(1) Add publication
(2) List all publications
(3) Check out publication
(4) Check in publication

Patrons
-----
(5) Add patron
(6) List all patrons

Utility
-----
(9) Help
(0) Exit

)";
```

Bonus

```
int View::select_from_menu() {
    string menu = R"(
<span font='18' weight='bold'>
    CSE1325
    Library Management
    System<sup><small>TM</small></sup></span>

<span weight='bold'
underline='double'>Publications</span>
(1) Add publication
(2) List all publications
(3) Check out publication
(4) Check in publication

<span weight='bold'
underline='double'>Patrons</span>
(5) Add patron
(6) List all patrons

<span weight='bold'
underline='double'>Utility</span>
<span color='#007f00'><b>(9)
Help</b></span>
(0) Exit

)";
```

Extreme Bonus

controller.cpp

Selected Code 1 of 3

```
void Controller::execute_cmd(int cmd) {
    if (cmd == 1) { // Add publication
        string title, author, copyright, isbn;
        int genre, media, age;
        bool cancel = false;

        Gtk::Dialog *dialog = new Gtk::Dialog();
        dialog->set_title("Create Publication");

        // Title
        Gtk::HBox b_title;

        Gtk::Label l_title{"Title:"};
        l_title.set_width_chars(15);
        b_title.pack_start(l_title, Gtk::PACK_SHRINK);

        Gtk::Entry e_title;
        e_title.set_max_length(50);
        b_title.pack_start(e_title, Gtk::PACK_SHRINK);
        dialog->get_vbox()->pack_start(b_title, Gtk::PACK_SHRINK);

        // Etc
    }
}
```

No changes to
controller.h

Extreme Bonus

controller.cpp

Selected Code 2 of 3

```
// Genre
Gtk::HBox b_genre;

Gtk::Label l_genre{"Genre:"};
l_genre.set_width_chars(15);
b_genre.pack_start(l_genre, Gtk::PACK_SHRINK);

Gtk::ComboBoxText c_genre;
c_genre.set_size_request(160);
c_genre.append("Fiction");
c_genre.append("Non-fiction");
c_genre.append("Self Help");
c_genre.append("Performance");
b_genre.pack_start(c_genre, Gtk::PACK_SHRINK);
dialog->get_vbox()->pack_start(b_genre, Gtk::PACK_SHRINK);

// Etc
```

Extreme Bonus

controller.cpp

Selected Code 3 of 3

```
// Show dialog
dialog->add_button("Cancel", 0);
dialog->add_button("OK", 1);
dialog->show_all();
int result = dialog->run();

dialog->close();
while (Gtk::Main::events_pending()) Gtk::Main::iteration();

title = e_title.get_text();
author = e_author.get_text();
copyright = e_copyright.get_text();
age = c_age.get_active_row_number();
genre = c_genre.get_active_row_number();
media = c_media.get_active_row_number();
isbn = e_isbn.get_text();

if (result == 1) library.add_publication(
    Publication(title, author, copyright, genre, media, age, isbn));
```