Costa Rica Institute of Technology

Computer Engineering School

Bachelor of Computer Engineering

IC3002: Analysis of Algorithms

Homework 1: Random Bars

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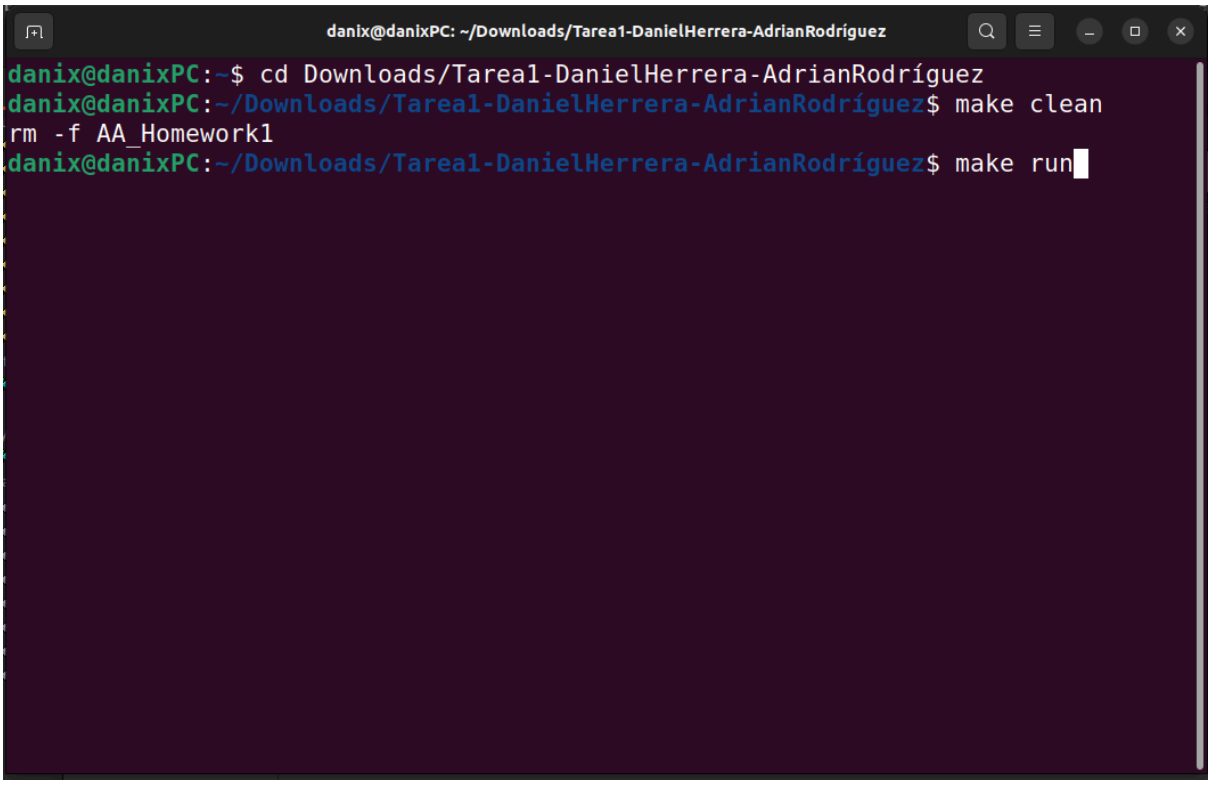
Description

A GTK and Glade desktop application that generates 301 unique random integers between 5 and 305, then displays them as a bar chart. Users can pick two colors via GTK color selectors one for the minimum value (5) and one for the maximum (305) with all other bars rendered in a proportionally blended color between the two. A button triggers the chart display, and a second button closes the application. Cairo may optionally be used for rendering.

How to run program



After extracting of the compressed file, to run the program just open a new terminal (bash) Then navigate to the folder with the downloaded project with ¨cd" command:

```
cd ~/Tarea1-DanielHerrera-AdrianRodríguez
```

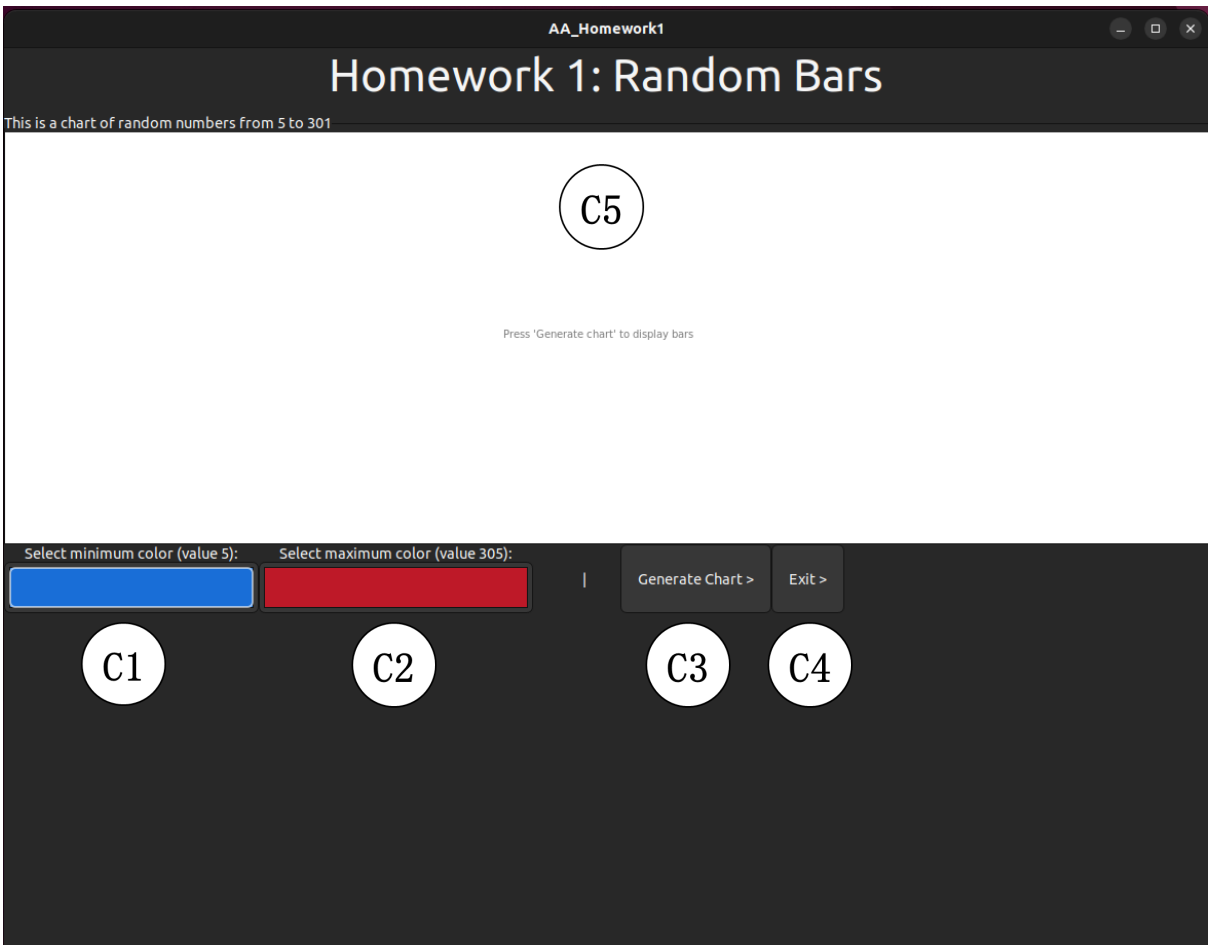
Then run the command to clean the project:

```
make clean
```

Finally, run the following command to execute the program:

```
make run
```

A new pop-up window is going to appear on the screen with the program.



Main menu pre-graphic generation (Imagen 2)

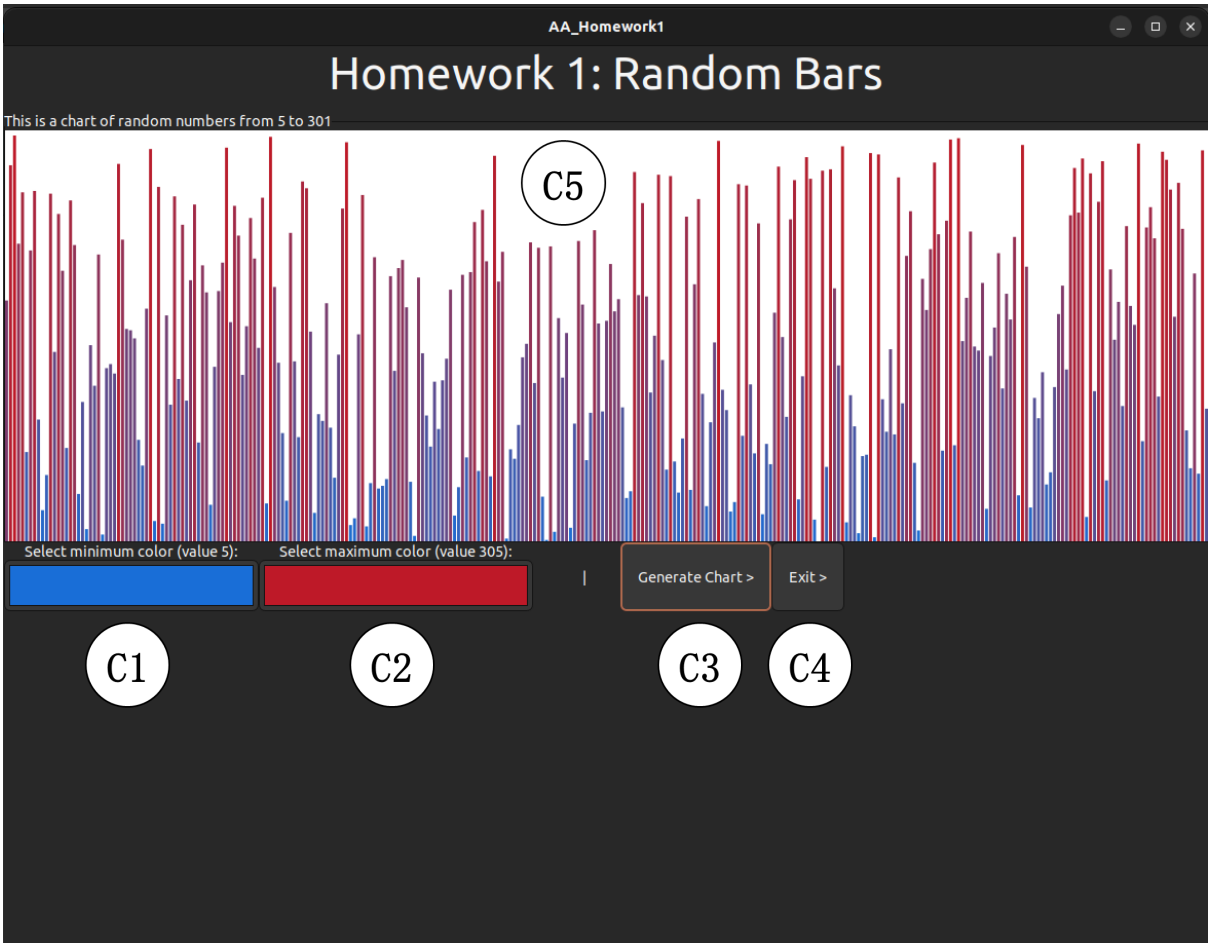
Item 2C1: Minimum colour selector that is assigned to value 5. Once this button gets clicked on the system will open image 4's menu.

Item 2C2: Maximum colour selector that is assigned to value 305. Once this button gets clicked on the system will open image 4's menu.

Item 2C3: Button that when pressed calls the function, then proceeds to create the image 3's graphic.

Item 2C4: Button that lets the user exit the program.

Item 2C5: Empty background that shows the image 3's graphic.



Main menu post-graphic generation (Image 3)

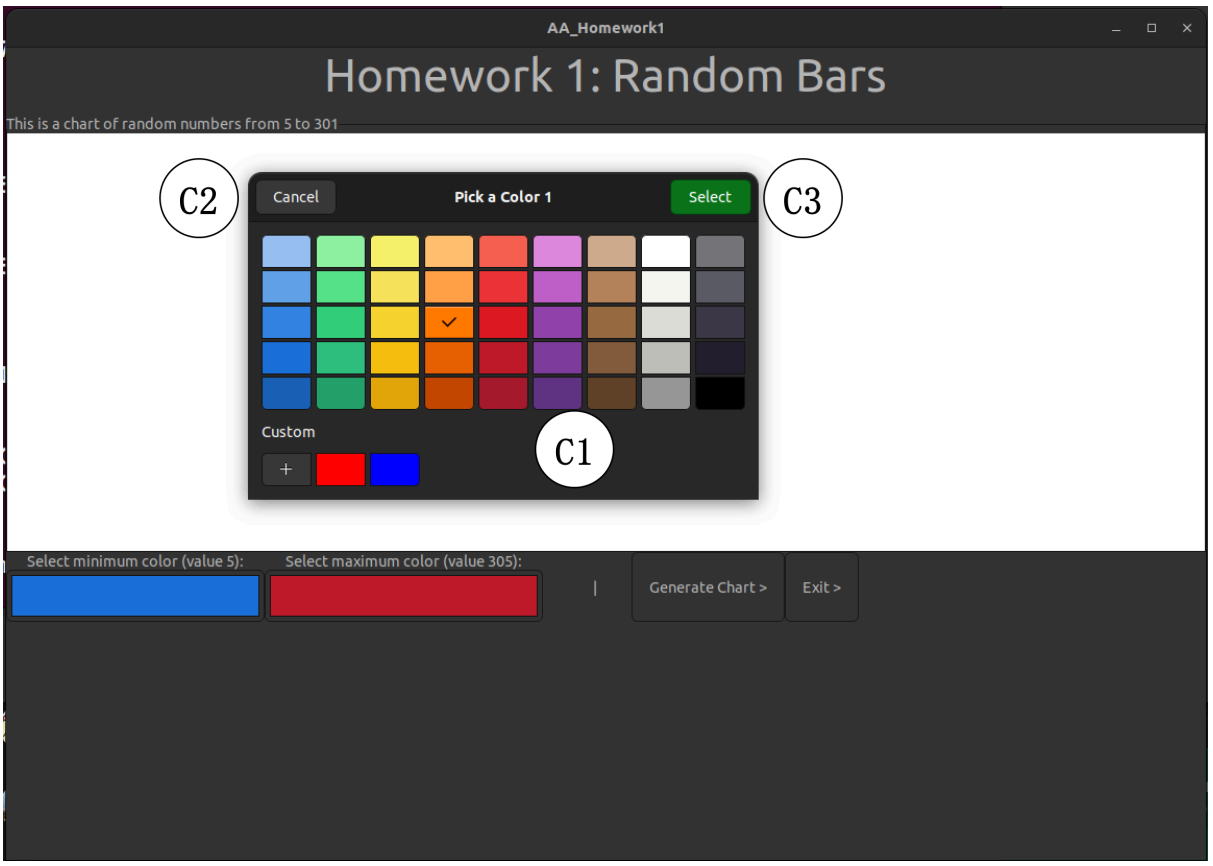
Item 3C1: Minimum colour selector that is assigned to value 5. Once this button gets clicked on the system will open image 4's menu.

Item 3C2: Maximum colour selector that is assigned to value 305. Once this button gets clicked on the system will open image 4's menu.

Item 3C3: Button that starts the function and generates the graphic that it is shown on item 3C5. It also updates the colours if needed.

Item 3C4: Button that lets the user exit the program.

Item 3C5: Background that shows the actual graphic.



Colour change menu (Image 4)

Item 4B1: Group of coloured buttons that lets the user select their preferred colour.

Item 4B2: Button that aborts the colour change, it exits this menu and maintains the previous colour.

Item 4B3: Button that confirms the colour change to the one selected on item 4B1, it exits this menu and waits until item 3B3 updates the previous colour to the new one.

References

Linux Gtk Glade Programming Part 1

cairo_t: Cairo: A Vector Graphics Library

Simple Gnome Application Using libglade and C/GTK+