Programming Fundamentals - Assignment 1

Before commencing with the assignment, ensure that a new Git repository is created. The initial commit should solely consist of the .gitignore file. The assignment contains ten straightforward and fundamental tasks. The primary goal of this assignment is to provide you with practice in using `printf` and String formatting in Java. Each task should be completed in a separate Java file within the repository. The file name should begin with 'Demo' and be followed by the respective task number. The last four tasks under the 6th number should have file names ending with 'task-a', 'task-b', 'task-c', and so forth. Adhere to proper naming conventions when designating your files. After the completion of each task, a commit should be made with a message such as 'Complete Task 1' or 'Complete Task 6 - A'. Upon finishing all the tasks, create a cloud repository within your GitHub Playground and push your local repo to this cloud repository. The reviewer should easily find all the ten Java files and the .gitignore file at the top level of your GitHub repository. No other files should be present in the repository. Finally, once all tasks have been completed, submit the link to your GitHub repository under the assignment on Google Classroom.

Please remember, if required, you're permitted to use the String.format() method. However, aside from this, the usage of any other APIs is not allowed.

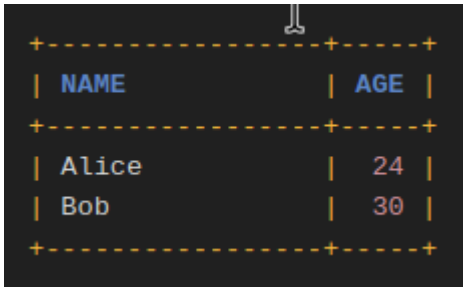
1. Suppose you have $123456.7890 in your bank account. Use `printf` to print this balance using thousand grouping, and rounded to 2 decimal places.
2. Use `Math.PI` to print the value of PI up to 3 decimal places using `printf`.
3. Given a telephone number as three separate integer variables (for example, 123, 456, and 7890), use `printf` to print the telephone number in the standard American format: (123) 456-7890. The area code (123) should be highlighted in the appropriate color.
4. Given a day (28), month (12), year (2023), hour (23), minute (59) and second (59) as separate integer variables, use `printf` to print the date-time in the format: "12/28/2023 23:59:59" with different colors to print day, month, year, hour, minute and second.
5. Given an ISBN number as four separate integer variables (for example, 978, 3, 16, and 1484100), use `printf` to print the ISBN number in the standard format:

"978-3-16-1484100". The block of numbers should be color coded accordingly.

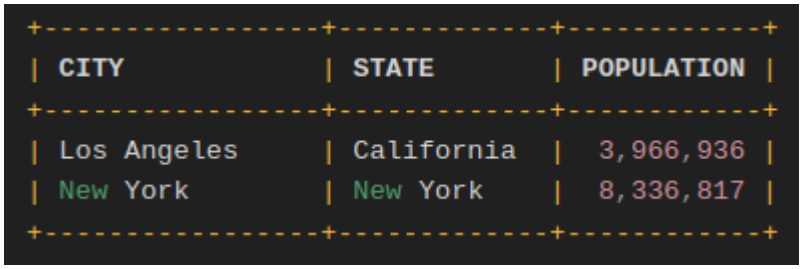
6. Write the code to generate following outputs. When you're writing your code, pay particular attention to the aesthetics of your output. This includes aspects such as the color of the borders, the color of the headers, whether the font is bold or regular, and the specific color of the font.

   a.

   b.



   c.



   d.