

# Applied Programming I

**Project #3**

**Jan. 20, 2010**

**Ver. 1.0**

Upgrade the VF computer program provided by the instructor to prepare a simplified shell expansion of a ship; the starting data is the Table of offsets in the format of the CHB computer program for Ship hydrostatics. The computer program must have the following characteristics:

- The program has to include an *icon*, different from the standard, which can be prepared by the students or downloaded from the web.
- Must include a Dialog box so the user can input the names of the data and result files.
- The calculation of the expanded length of each station must be improved applying any method of interpolation/integration.
- The user has to input the frame spacing by region, and the plot must include them. To do this, the different regions must be defined, including the corresponding frame spacing.
- The shell expansion must include the bottom tank top; to complete this, the user must input the starting and final frames and the height of the double bottom.
- The plot must appear first on the screen, and then ask the user if a *dxf* file is to be prepared.
- The code must include enough comments that allows the developer future improvements.

The report must consist of a User's manual, which usually includes:

- Index of content.
- General description of the algorithms implemented by the students.
- Definition of the terminology used.
- Description of the results.
- Example of the application of the program.

The grade will be assigned according to:

- Quality of written report.
- Quality of oral presentation (15 minutes).
- Quality of the final plot.
- Innovations: see in existing shell expansions, other elements that can be added in your project.

**Do not forget: you must report the number of hours employed to complete the project.**

Deadline: First version of reports: Wednesday 3rd of February 2010

Oral presentations and final version of report: Friday 5th of February, in schedule to be later agreed on.