# **Prerequisites:**

- Basic knowledge of using computer and text editor
- Knowledge how to create a program
- Knowledge how to create a function
- Knowledge of different types
- Knowledge about conditional statements
- Knowledge about loops
- Knowledge how to work with files
- Knowledge how to create a pointer
- Create list

## Aims:

In this laboratory student will learn how to:

• Use in practice issues already known from previous laboratories.

### 1 Exercises

#### 1.1 Tic Tac Toe Game

- 1. Create a new collection of data stored in an 2D array. Size of this array is 3 × 3. In each cell there could be *X* or *O*. Let's say *O* will be denoted as 0 and *X* as 1. Other values means that a particular cell is not filled.
- 2. Prepare a graphical representation of game's board of size  $3 \times 3$ .
- 3. Prepare some menu for this game where it will be some interaction with the user.
- 4. Add some logic to your game which will be responsible for checking winning condition, placing and displaying users move, and so on.
- 5. Game should be between user and computer. Think a little bit about computer's moves.

## 1.2 Ship Game

- 1. Prepare a graphical representation of game's board of size  $10 \times 10$ .
- 2. Prepare some menu for this game where it will be some interaction with the user.
- 3. Create a new 2D array for storing a current game status.
- 4. Add some logic to your game which will be responsible for checking winning condition, placing and displaying users move, and so on.
- 5. Game should be between user and computer. Think a little bit about computer's moves.