# Data Structures and Java

## Assignment 00 – Expressions, Variables, Operators and Control Flow

### Assignment objectives:

In this assignment, you may use your knowledge of the following concepts:

1. Expressions, statements and blocks.
2. Variables
3. Operators
4. Control flow (loops and conditions)

Note that this assignment is not graded.

### Tasks

#### Task 1

Create a new project in NetBeans with a class called A00<FirstName><LastName>.java. A template is provided on Canvas to help you.

#### Task 2

Create 5 primitive variables to hold the goals against average (GAA) for the following 5 goaltenders:

1. Sergei Bobrovsky – CBJ
2. Carey Price – MTL
3. Antti Niemi – SJS
4. Jaroslav Halak – STL
5. Josh Harding – MIN

The GAA for goaltenders can be found here: <http://www.nhl.com/ice/playerstats.htm?fetchKey=20142ALLGAGAll&sort=goalsAgainstAverage&viewName=goalsAgainstAverage>

Once the variables have been assigned, put each into one array.

#### Task 3

Write a “for” loop to iterate through the array of GAAs and print out goal quality categories as follows (if/else statement).

Print string “Excellent Goaltending” if GAA < 2

Print string “Strong Goaltending” if GAA >= 2 but < 2.5

Print string “Fair Goaltending” if GAA >= 2.5 but < 3

Print string “Poor Goaltending” if GAA >= 3

#### Task 4

Convert the following word problem to java code and find the answer.

In the “2012-13 Regular Season”, there were several goaltenders that played in the NHL. If 1/10 of them were “Excellent”, 1/2 are “Strong” and 1/5 are “Fair”, and the remaining 10 are “Poor”, what is the number of “Fair” goaltenders?

#### Task 5

The salary cap for the NHL for the 2013-14 season is $64.3M. Assuming an average player salary of $2.4M, how many players can a given NHL team have under contract (ignoring bonuses and long term injury reserve credits)? You can read more about NHL salary caps here: <http://www.capgeek.com/>

Using the while loop, adding one player at a time, code this logic in Java and print out the how many players an NHL team can have under contract.

### Deliverables

Please zip your entire project folder containing the **src** sub-folder and the **nbproject** subfolder (the others are not necessary). Name the zip file **A00\_firstlastname.zip** and submit to Canvas.