**Workshop Grading and Promotion Policy**

Workshops for this course will be assessed using the following criteria:

- Workshops are graded based on two components:
    1. Individual Logic Assignment (40%)
        - Individual work is due **2 days** **after the assigned date** (class) by **end of day 23:59 EST**
        - Individual logic assignments are to be done individually
        - Members who do not submit work on-time, will receive a zero grade for the workshop
        - Members who receive a zero grade for the individual part, will not be eligible to receive grades for the group solution part
    2. Sub-Group Overall Solution (60%)
        - Group solution is due **4 days** **after the assigned date** (class) by **end of day 23:59 EST**
        - **Name and ID of all contributing members must be stated at the top of all file submissions**
        - If not submitted on-time, a zero grade will be applied for the group portion of the workshop
        - If the submitted solution is essentially a copy of the individual parts thrown together containing no effort to properly integrate as a seamless overall solution, a zero grade will be applied for the group portion of the workshop

- A zero grade on a workshop will not be counted towards the minimum necessary number of completed workshops

- Video presentations are due **1 day after your next class** by **end of day 23:59 EST**
    o Each student must do a video presentation **at least once** by the end of the term and should minimally consist of the following:
        ▪ Description of the problem and its solution in non-technical terms. You should assume your audience is non-technical and interested in using your application solution.

        ▪ Market your application solution by providing sample screenshots of how you envision your application to look which should include a sample workflow demonstrating how easy it is to use

- You must **successfully complete 9 workshops** (if > 9 are completed, the best 9 will be used)

- Workshop solutions and presentations will be evaluated using the published workshop rubrics

**Group Breakdown**

Each group has **two sub-groups** determined by the assigned **member number**:

Sub-Group 1: **Members 1-3**
- **Member-1**: Responsible for doing workshop **Logic 1**
- **Member-2**: Responsible for doing workshop **Logic 2**
- **Member-3**: Responsible for doing workshop **Logic 3**

Sub-Group 2: **Members 4-6**
- **Member-4**: Responsible for doing workshop **Logic 1**
- **Member-5**: Responsible for doing workshop **Logic 2**
- **Member-6**: Responsible for doing workshop **Logic 3**

Sub-Group Solution

- Each sub-group is a <u>team</u> and **must work together** creating the overall group solution
- The group solution is <u>not</u> to be done by an individual. The group solution is expected to be a seamless solution (looking as though one person has done it) and has undergone refinement and testing to ensure the logic properly addresses the workshop problem.
- If the submitted work amounts to essentially copying and pasting everyone's logic part together, a zero grade will be applied for the group work portion.

**Work Submission**

All work must be <u>emailed to your instructor</u>. You must follow the email guidelines described below.

- All work submitted (applied to both individual and group submissions) ==**requires all contributing members names to be stated at the top of all files being submitted**==

<u>Email Subject Line</u>
- o Highlighted parts indicate your specific information
- o There are no spaces
- o `APS145-`==`[SECTION]`==`-WS`==`[#]`==`:Group`==`[#]`==
  - ▪ Example: `APS145-NAA-WS1:Group3`

<u>File Attachment</u>
**Individual Work Submissions**
    Attach a file containing your work (**pseudo code** <u>OR</u> **flowchart**)
- o Highlighted parts indicate your specific information
- o **Pseudo code**: `logic`==`[#]`==`.`==`fullname`==`.pseudocode.txt`
  - ▪ Example: `logic2.Cameron Gray.pseudocode.txt`
- o **Flowchart**:    `logic`==`[#]`==`.`==`fullname`==`.flowchart.jpg`   (*Note:* .**jpg** <u>or</u> .**png**)
  - ▪ Example: ==`logic3.Cameron Gray.flowchart.png`==

**Sub-Group Solution Submission**
    Attach a file containing your group work (**pseudo code** <u>OR</u> **flowchart**)
- o Highlighted parts indicate your specific information
- o There are no spaces
- o **Pseudo code**: `ws`==`[#]`==`.group.pseudocode.txt`
  - ▪ Example: ==`ws1.group.pseudocode.txt`==
- o **Flowchart**:    `ws`==`[#]`==`.group.flowchart.jpg`  (*Note:* .**jpg** <u>or</u> .**png**)
  - ▪ Example: ==`ws3.group.flowchart.png`==

**Presentation Submission**
    Video files can be quite large and will most likely be rejected by Seneca's email services. Therefore, you will have to **<u>SHARE</u>** your video file using your <u>Seneca account</u> Microsoft **ONE drive**.
- o **Video file name**:     `WS`==`[#]`==`.`==`fullname`==`.video.mp4`
  - ▪ Example:       ==`WS4.Cameron Gray.video.mp4`==
- o Go to https://myseneca.ca, click on (top left corner) ▦ and select the <u>One Drive</u> application option
- o Upload your video file: ⬆ Upload ∨
- o Share 🖻the file with your instructor: **Copy the shared link**
  - Copy link
    - People in Seneca with the link can view    Copy
- o Paste the shared link into your email

# Workshop - 2

<u>Workshop Value</u>: 10 marks (5% of your final grade)

**<u>Learning Outcomes</u>**
Upon successful completion of this workshop, you will have demonstrated the abilities:

- to decipher and identify a problem
- to analyze and decompose a problem
- to identify the required detailed steps to solve a problem
- to communicate the solution to fellow peers and non-technical business persons

## Workshop Overview

Sometimes it is not possible to consolidate logic when the underlying process is dependent on combinations or permutations. This can be tedious as a programmer because this requires you to explicitly handle each possible state.

## Workshop Details

The city winter weather dispatch service department needs a web application tool that can be used to advise the city service clerks what resources are required to treat a given set of winter weather conditions. The web application you develop will replace the manual chart-based method currently being used.

The solution will depend on three (3) user input values that describe the weather conditions:

1. <u>Type of Weather</u>:
    - Snow
    - Ice
    - Mixed (combination of both snow and ice)

2. <u>Accumulation Amount per Hour</u>:
    - Measured in centimeters (cm) when the weather type is snow or mixed
    - Measured in millimeters (mm) when the weather type is ice

3. <u>Temperature</u> in degree's Celsius

Your solution will need to analyze the input values and determine the necessary resources required to treat the weather conditions. Refer to the chart on the next page that is currently used by staff.

There are three (3) types of resources that can potentially be dispatched:  snowplow, sand truck, and a salt truck.  If a snowplow truck is required, the number of trucks should be specified.  When sand or salt trucks are needed, the number of trucks required should be specified as well as the rate of application (light, normal, heavy).  The solution should output a concise meaningful message that describes to the clerk (user) the necessary action(s) to take.

Use the below chart that defines the rules and conditions for each resource:

| Precipitation Accumulation | Temperature < -10.0 | Temperature -10.0 to -5.0 | Temperature > -5.0 | # of Plow Trucks | # of Sand Trucks (application rate) | # of Salt Trucks (application rate) |
|---|---|---|---|---|---|---|
| **Input Conditions** | | | | **Prescribed Output Actions** | | |
| **SNOW** | | | | | | |
| <= 2.5 cm | ✔ | | | | 1 (Light) | |
| | | ✔ | | | | 1 (Light) |
| | | | ✔ | No Action Required | | |
| 2.6 - 5.0 cm | ✔ | | | | 1 (Normal) | |
| | | ✔ | | | | 1 (Normal) |
| | | | ✔ | No Action Required | | |
| 5.1 - 15.0 cm | ✔ | | | 1 | 1 (Normal) | |
| | | ✔ | | 1 | | 1 (Normal) |
| | | | ✔ | 1 | | |
| 15.1 - 45.0 cm | ✔ | | | 2 | 1 (Normal) | |
| | | ✔ | | 2 | | 1 (Normal) |
| | | | ✔ | 2 | | |
| 45.1 + cm | *State of emergency (Organize army and other jurisdiction support)* | | | | | |
| **ICE** | | | | | | |
| <= 3.0 mm | No Action Required | | | | | |
| 3.1 - 5.0 mm | ✔ | | | | 1 (Normal) | |
| | | ✔ | | | | 1 (Normal) |
| | | | ✔ | No Action Required | | |
| 5.1 - 15.0 mm | ✔ | | | | 2 (Heavy) | |
| | | ✔ | | | | 2 (Heavy) |
| | | | ✔ | | | 1 (Heavy) |
| 15.1 + mm | *State of emergency (Organize army and other jurisdiction support)* | | | | | |
| **MIXED** | | | | | | |
| <= 2.5 cm | No Action Required | | | | | |
| 2.6 - 5.0 cm | ✔ | | | 1 | 1 (Light) | |
| | | ✔ | | 1 | | 1 (Light) |
| | | | ✔ | 1 | | |
| 5.1 - 15.0 cm | ✔ | | | 1 | 1 (Heavy) | |
| | | ✔ | | 1 | | 1 (Heavy) |
| | | | ✔ | 1 | | 1 (Normal) |
| 15.1 - 45.0 cm | ✔ | | | 2 | 1 (Heavy) | |
| | | ✔ | | 2 | | 1 (Heavy) |
| | | | ✔ | 2 | | 1 (Light) |
| 45.1 + cm | *State of emergency (Organize army and other jurisdiction support)* | | | | | |

# Work Breakdown

**[Logic 1]** This will do the logic for selecting the salters, sanders and plows for SNOW only. It will cover all the amounts of snow and all the temperature ranges.

**[Logic2]** This will do the logic for selecting the salters, sanders and plows for ICE only. It will cover all the amounts of ice and all the temperature ranges.

**[Logic 3]** This will do the logic for selecting the salters, sanders and plows for MIXED only. It will cover all the amounts of mixed precipitation and all the temperature ranges.

## Your Tasks

1. Where applicable, apply the core components of the **computational thinking** approach to problem solving to help you synthesize a solution
2. Communicate the independent logic parts and group solutions using pseudo code/flowchart (see assignments below)
3. Create a video presentation to market your envisioned application

**Individual and sub-group assignments**

| Sub-Group 1 (pseudo code) | | | | |
|---|---|---|---|---|
| **Task** | **Subtask** | **Member(s)** | **Marks** | **Comments** |
| **Pseudocode** | Logic 1 | **4** | 40% | Members are graded <u>individually</u> |
| | Logic 2 | **5** | 40% | |
| | Logic 3 | **6** | 40% | |
| | Group Solution | **4-6** | 60% | Eligible members get <u>same mark</u> |
| Sub-Group 2 (flowchart) | | | | |
| **Task** | **Subtask** | **Member(s)** | **Marks** | **Comments** |
| **FlowChart** | Logic 1 | **1** | 40% | Members are graded <u>individually</u> |
| | Logic 2 | **2** | 40% | |
| | Logic 3 | **3** | 40% | |
| | Group Solution | **1-3** | 60% | Eligible members get <u>same mark</u> |
| **Video** | Presentation * | **2 or 5** | 100% | Members rotate weekly |

**\* Presentation**: Decide among yourselves which member among the entire group will be doing the presentation.  Priority should be given to those who have not yet done one.