BTP100 Lesson Outline: Week 3

A. Concepts

1. selection logic

a) if-then

b) if-then-else

c) boolean expressions: relational and logical operators; De Morgan’s Law

d) flowcharts

2. case-by-case analysis: the switch statement

**3. flags and nesting**

**4. iteration (indefinite): while loop, do-while loop; flowchart**

**5. iteration (definite/counter-controlled): for loop; flowchart**

6. structured programming (single-entry, single-exit, pseudocode, flags)

7. Testing and Debugging

a) Debugging : Using Visual Studios Debug mode, use of watch and break points

b) Debugging : Manual Walkthroughs

c) Testing: Black box

d) Testing : White Box

B. Additional Videos

structured programming:

<https://www.youtube.com/watch?app=desktop&v=uFI4ANYt7gw&feature=youtu.be>

the switch statement:

<https://www.youtube.com/watch?app=desktop&v=XGuQ2y7YYqU&feature=youtu.be>

flags and nesting:

<https://www.youtube.com/watch?app=desktop&v=7OjnIoUwn2M&feature=youtu.be>

C. Code Examples (Blackboard)

logic\_if\_and.c, logic\_else.c, logic\_and.c, logic\_or.c, logic\_switch.c,

while.c, for.c, dowhile.c

D. Video Recording of the Lecture (BB and Teams)

E. Course Notes

<https://ict.senecacollege.ca/~btp100/pages/content/const.html#sel>