# Basics9 - Ellipsis

### **Due Date**

- See Piazza for due date and time
  - Grading the next day
- Submit program to perforce in your student directory
  - Sub directory called:
    - /Basics9/...
  - Fill out your Basics9 Submission Report.pdf
    - Place it in the same directory as your solution
    - Enter the final Changelist number of your submission
    - Enter the number of test passed
    - Write up a quick discussion in the report
      - What you learned from this basics

#### Goals

- Ellipsis in C++
  - Understand Ellipsis functions
  - o Understand Parameter parsing

### **Assignments**

- General:
  - Have fun learning Ellipsis:
    - Write two programs and pass the tests
      - SecondMax()
      - parse()
    - There are only 2 tests
      - So the best score is 2/2
- Program 1: Write an ellipsis program SecondMax()
  - o Description:
    - int SecondMax(int count, ...)
      - Where the function takes an arbitrary number of parameters
      - The first number is the count, followed by the data
      - Return the 2nd largest number
  - o Example:
    - val = SecondMax(5, 6, 3, 8, 9, 7);
      - There are 5 data values, so the 1st parameter is 5
      - returns 8
    - val = SecondMax(10, 1, 2, 3, 4, 5, 2, 5, 4, 3, 2);
      - There are 10 data values, so the 1st parameter is 5
      - returns 4

- o it's the 2nd largest number, since 5 is repeated
- Program 2: Create a standalone program called *parse* that reads into custom chunk and name run-time file format. *P*ain *A* nd *R*are *S*uffering *E*xercise
  - Standalone executable
    - ChunkType only used for this programming assignment

```
enum ChunkType
{
     VERTS_TYPE,
     NORMS_TYPE,
     ANIM_TYPE,
     TEXTURE_TYPE,
     UV_TYPE
};
```

- Reads and parses the arguments
  - Return 0
    - o Successful no parsing errors detected
  - Return -1
    - o Detects a parsing error
- o Formats
  - Parameter formats:
    - parse < options >
  - options parameters (order isn't important)
    - [-t CHUNK\_TYPE]
      - o set chunk type
    - [-*n* CHUNK\_NAME ]
      - o set chunk name (max 19 characters, 20 including the null)
- o Example of the full command line
  - Successful (returns 0)

```
parse -t UV_TYPE -n player_1
```

- parse -n player 1 -t UV TYPE
- parse -T NORMS\_TYPE -N player\_1
- parse -t VERTS\_TYPE -n Fiat
- Unsuccessful causes error <u>(returns -1)</u>
  - parse -R UV\_TYPE -n player 1
  - parse -n player 88888888881 -t UV TYPE
  - parse -t NORM TYPE -n player 1
  - parse -t VERTS\_TYPE -n <missing>
- If you are unhappy Blame the door you picked
  - o xoxoxo Ed

- Make sure that your program compiles and runs
  - o Warning level 4 warning free.
  - o Your code should be squeaky clean.
- We are using Perforce
  - You should have received the document describing how to login.
    - Please look at the documentation and videos under the reference directory
  - Submit program to perforce in your student directory
    - Sub directory called: /Basics9/...
      - As described above
  - o All your code must compile from perforce with no modifications.
    - Otherwise it's a 0, no exceptions

### Validation

Simple check list to make sure that everything is checked in correctly

- Did you do answer all the questions (initial answers are incorrect)?
- Do they compile and run without any errors?
- Warning level 4 free?
- Submitted it into /Basics9 directory without the extra files?
- Can you delete you local drive, regrab the Basics9 directory?
  - o Is all the code there?

## Hints

Most assignments will have hints in a section like this.

- This is pretty easy Basic assignment
  - o Learn Ellipsis by look on the internet
- I expect this assignment to be completed quickly for most of the students
  - o Please make sure you fully understand this code without a debugger.
  - Many little lessons here for those who put in the effort.
- Enjoy