Basics9 – Ellipsis

Due Date

- See Piazza for any changes to due date and time
  - Friday by midnight
  - Grading the next day Saturday Morning
- 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
  - 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()
  - 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
  - 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
        - 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
        - Successful - no parsing errors detected
      - Return -1
        - Detects a parsing error
  - Formats
    - Parameter formats:
      - ***parse*** *< options >*
    - options parameters (order isn't important)
      - [***-t*** CHUNK_TYPE]
        - set chunk type
      - [***-n*** CHUNK_NAME]
        - set chunk name (max 19 characters, 20 including the null)
  - 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 (returns -1)
      - *parse –R UV_TYPE -n player_1*
      - *parse -n player_8888888888881 -t UV_TYPE*
      - *parse -t NORM_TYPE -n player_1*
      - *parse -t VERTS_TYPE -n <missing>*

- Make sure that your program compiles and runs
  - Warning level ALL - warning free.
  - 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
  - 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 ALL free?
- Submitted it into /Basics9 directory - without the extra files?
  - Did you verify your submission

Hints

Most assignments will have hints in a section like this.

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