

## Simple Bowler Notes

Contents of this document, include:

- 1.) Brief intro
- 2.) Developers drawings and thought jpg
- 3.) Sample trace

This is a simple bowling simulation that takes into account the delivery and release style of the bowling ball to simulate 10pin bowling. To build, use VS2017 Community Edition on Windows 10, and open up c1.sln into VS2017. Defaults to debug and build away. Total allotted time was roughly 3 hours or so, 30 minutes or so of that was coming up with the approach and the remainder coding and iterating on the sim. Due to the time constraint the sim does not include a complete scoring system and the couple of required tests. I had issues getting the catch2 code compiling and working on my windows laptop – I can spend some more time on this if it's necessary, but more than likely I'll need to get my linux laptop back into a usable state and iterate on there.

Delivery styles include: stroker, tweener and cranker (ever increasing ball speed). The release styles include: traditional, 2-hander, UFO, and backup.

The general software requirements were: having a bowling simulation, ability to access the score at anytime and the calculatoroll api are implemented as requested. Getting the score at anytime is an atomic as there is no clear need for BowlingGame to be a singleton, as using singletons in a testing framework would be typically ill-advised, so the atomic seemed the way to go versus any other heavy/costlier approaches. There are gutters, normal pin strikes and strikes – all tied to variations of two styles. I initially allowed the player to dynamically alter the delivery and release styles which would contribute to an increasing wrist fatigue.

The sim has several commented out areas of code, such as the initial interactive display for allowing the player to visualize the release lanes. This is partially completed and if you want, you can re-enable the dynamic style code and along with a small change to the wrist fatigue code, start accumulating wrist fatigue as you vary your styles. All these areas have comments around them regarding their state.



if you could make style 6  
flow in an emphatic to  
power curve

Power

$$\frac{1}{2} \text{ 2 handed } (-1)$$

10-5

one  
impacted.

Relax =  
good size ball

doctors

$$q_{\text{after } a-s} = 26\% + (w f \times 13)\%$$

$$R_{\text{DUA}} < r_{\text{q after}}$$

Part impact  
in road and  
land impact  
rehabilitation

Participant  
in real estate  
and impact  
reduction

## Sample Trace:

Welcome to simple bowler

=====

Frame : 0    Score: 0

=====

Roll 1  
Press Enter

Pin 7 goes down  
Pin 4 goes down  
Roll 2  
Press Enter

Pin 6 goes down

Frame : 1    Score: 3

=====

Roll 1  
Press Enter

Pin 8 goes down  
Roll 2  
Press Enter

Pin 6 goes down

Frame : 2    Score: 5

=====

Roll 1  
Press Enter

Pin 5 goes down  
Pin 9 goes down  
Roll 2  
Press Enter

Pin 8 goes down  
Pin 2 goes down

Frame : 3    Score: 9

=====

Roll 1  
Press Enter

Pin 6 goes down  
Pin 3 goes down  
Roll 2  
Press Enter

Gutter !!!

Frame : 4    Score: 11

=====

Roll 1  
Press Enter

Pin 7 goes down  
Pin 4 goes down  
Pin 1 goes down  
Roll 2  
Press Enter

Gutter !!!

Frame : 5    Score: 14

=====

Roll 1

Press Enter

Gutter !!!

Roll 2

Press Enter

Pin 8 goes down

Pin 2 goes down

Frame : 6    Score: 16

=====

Roll 1

Press Enter

Gutter !!!

Roll 2

Press Enter

Pin 8 goes down

Frame : 7    Score: 17

=====

Roll 1

Press Enter

Pin 5 goes down

Roll 2

Press Enter

Pin 7 goes down

Pin 4 goes down

Frame : 8    Score: 20

=====

Roll 1

Press Enter

Gutter !!!

Roll 2

Press Enter

Pin 7 goes down

Pin 4 goes down

Pin 1 goes down

Frame : 9    Score: 23

=====

Roll 1

Press Enter

Gutter !!!

Roll 2

Press Enter

Pin 6 goes down

Pin 3 goes down

=====

Final Score: 25

=====

=====

Thanks for playing simple bowler

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