

Simple Bowler Notes

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- 1.) Brief intro
- 2.) Developers drawings and thought jpg
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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 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 there.

The general software requirements were: having a bowling simulation, ability to access the score at anytime and the calculateroll 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 blocked 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 the a small change to the wrist fatigue code, accumulate fatigue as you vary your styles. All these areas have comments around them regarding there state.

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

Power

release cases

with 40 mins over impact level.

0 1 2 3 4 5 6

7 8 9 10

11 12 13 14 15 16 17 18 19 20

21 22 23 24 25 26 27 28 29 30

31 32 33 34 35 36 37 38 39 40

41 42 43 44 45 46 47 48 49 50

51 52 53 54 55 56 57 58 59 60

61 62 63 64 65 66 67 68 69 70

71 72 73 74 75 76 77 78 79 80

81 82 83 84 85 86 87 88 89 90

91 92 93 94 95 96 97 98 99 100

101 102 103 104 105 106 107 108 109 110

111 112 113 114 115 116 117 118 119 120

121 122 123 124 125 126 127 128 129 130

131 132 133 134 135 136 137 138 139 140

141 142 143 144 145 146 147 148 149 150

151 152 153 154 155 156 157 158 159 160

161 162 163 164 165 166 167 168 169 170

171 172 173 174 175 176 177 178 179 180

181 182 183 184 185 186 187 188 189 190

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421 422 423 424 425 426 427 428 429 430

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531 532 533 534 535 536 537 538 539 540

541 542 543 544 545 546 547 548 549 550

551 552 553 554 555 556 557 558 559 560

561 562 563 564 565 566 567 568 569 570

571 572 573 574 575 576 577 578 579 580

581 582 583 584 585 586 587 588 589 590

591 592 593 594 595 596 597 598 599 600

601 602 603 604 605 606 607 608 609 610

611 612 613 614 615 616 617 618 619 620

621 622 623 624 625 626 627 628 629 630

631 632 633 634 635 636 637 638 639 640

641 642 643 644 645 646 647 648 649 650

651 652 653 654 655 656 657 658 659 660

661 662 663 664 665 666 667 668 669 670

671 672 673 674 675 676 677 678 679 680

681 682 683 684 685 686 687 688 689 690

691 692 693 694 695 696 697 698 699 700

701 702 703 704 705 706 707 708 709 710

711 712 713 714 715 716 717 718 719 720

721 722 723 724 725 726 727 728 729 730

731 732 733 734 735 736 737 738 739 740

741 742 743 744 745 746 747 748 749 750

751 752 753 754 755 756 757 758 759 760

761 762 763 764 765 766 767 768 769 770

771 772 773 774 775 776 777 778 779 780

781 782 783 784 785 786 787 788 789 790

791 792 793 794 795 796 797 798 799 800

801 802 803 804 805 806 807 808 809 810

811 812 813 814 815 816 817 818 819 820

821 822 823 824 825 826 827 828 829 830

831 832 833 834 835 836 837 838 839 840

841 842 843 844 845 846 847 848 849 850

851 852 853 854 855 856 857 858 859 860

861 862 863 864 865 866 867 868 869 870

871 872 873 874 875 876 877 878 879 880

881 882 883 884 885 886 887 888 889 890

891 892 893 894 895 896 897 898 899 900

901 902 903 904 905 906 907 908 909 910

911 912 913 914 915 916 917 918 919 920

921 922 923 924 925 926 927 928 929 930

931 932 933 934 935 936 937 938 939 940

941 942 943 944 945 946 947 948 949 950</

I'm a fan of seeing development notes, so here's the one-page of notes and doodles while I read the wikipedia page (also included as devDoodles.jpg in github).

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

=====

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Thanks for playing simple bowler

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