Programming Project

CS431.01 – DR. YOUNG JOSHUA J. CAMACHO

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testdata1.txt
 First Come First Serve
 [Job101]0-----9 [Job102]9----14 [Job103]14------27 [Job104]27-----35 [Job105]35--38 [Job106]38-----45
  (continued) =>
 Ave Processing time = 7.5
 Ave Turnaround time = 28.0
Average Waiting Time = 20.5
  _____
ShortestJobFirst
  [Job105]0---3 \ [Job102]3----8 \ [Job106]8------15 \ [Job104]15------23 \ [Job101]23------32 \ [Job103]32------45
  (continued) =>
 Ave Processing time = 7.5
Ave Turnaround time = 21.0
Average Waiting Time = 13.5
  -----
 Round Robin with time slice = 2
  [Job101]0--2 \ [Job102]2--4 \ [Job103]4--6 \ [Job104]6--8 \ [Job105]8--10 \ [Job106]10--12 \ [Job101]12--14 \ [Job102]14--16 \ [Job102]14--1
  (\texttt{continued}) = \\ \text{[Job103]} 16 - 18 \ [\texttt{Job104]} 18 - 20 \ [\texttt{Job105]} 20 - 21 \ [\texttt{Job106]} 21 - 23 \ [\texttt{Job101]} 23 - 25 \ [\texttt{Job102]} 25 - 26 \ [\texttt{Job103]} 26 - 28 \ [
    (\texttt{continued}) = \\ [\texttt{Job104}]28 - 30 \ [\texttt{Job106}]30 - 32 \ [\texttt{Job101}]32 - 34 \ [\texttt{Job103}]34 - 36 \ [\texttt{Job104}]36 - 38 \ [\texttt{Job106}]38 - 39 \ [\texttt{Job104}]36 - 38 \ [\texttt{Job106}]38 - 39 \ [\texttt{Job106
  (continued) => [Job101]39-40 [Job103]40--42 [Job103]42--44 [Job103]44-45
 Ave Processing time = 7.5
 Ave Turnaround time = 34.833332
 Average Waiting Time = 27.333332
    ______
  _____
 Round Robin with time slice = 5
  [Job101]0----5 \ [Job102]5----10 \ [Job103]10----15 \ [Job104]15----20 \ [Job105]20---23 \ [Job106]23----28
    (\texttt{continued}) = \\ [\texttt{Job101}] 28 ----32 \quad [\texttt{Job103}] 32 ----37 \quad [\texttt{Job104}] 37 ---40 \quad [\texttt{Job106}] 40 --42 \quad [\texttt{Job103}] 42 ---45 \quad [\texttt{Job104}] 37 ---40 \quad [\texttt{Job106}] 40 --42 \quad [\texttt{Job103}] 42 ---45 \quad [\texttt{Job106}] 40 --42 \quad [\texttt{Job106}] 40 
 Ave Processing time = 7.5
Ave Turnaround time = 32.0
 Average Waiting Time = 24.5
```

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testdata2.txt
  [Job201]0------33 [Job205]33-----41
    (continued) => [Job206]41-42 [Job207]42-----48 [Job208]48-------63 [Job209]63-----70 [Job210]70------93
  (continued) => [Job211]93-----105 [Job212]105-----114
  Ave Processing time = 9.5
  Ave Turnaround time = 54.583332
 Average Waiting Time = 45.083332
  ShortestJobFirst
  [\mathsf{Job206}] \ 0-1 \ [\mathsf{Job202}] \ 1----5 \ [\mathsf{Job203}] \ 5----10 \ [\mathsf{Job207}] \ 10-----16 \ [\mathsf{Job209}] \ 16-----23 \ [\mathsf{Job205}] \ 23-----31
    (continued) => [Job212]31------40 [Job201]40------51 [Job211]51-----63 [Job204]63------76
  (continued) => [Job208]76------114
  Ave Processing time = 9.5
  Ave Turnaround time = 43.416668
  Average Waiting Time = 33.916668
  Round Robin with time slice = 2
  [\mathsf{Job201}] \ 0 - - 2 \ [\mathsf{Job202}] \ 2 - - 4 \ [\mathsf{Job203}] \ 4 - - 6 \ [\mathsf{Job204}] \ 6 - - 8 \ [\mathsf{Job205}] \ 8 - - 10 \ [\mathsf{Job206}] \ 10 - 11 \ [\mathsf{Job207}] \ 11 - - 13 \ [\mathsf{Job208}] \ 13 - - 15 \ [
    (\texttt{continued}) = \\ [\texttt{Job209}]15 - 17 \ [\texttt{Job210}]17 - 19 \ [\texttt{Job211}]19 - 21 \ [\texttt{Job212}]21 - 23 \ [\texttt{Job201}]23 - 25 \ [\texttt{Job202}]25 - 27 \ [\texttt{Job203}]27 - 29 \\ [\texttt{Job203}]27 - 29 \ [\texttt{Job204}]27 - 29 \ [\texttt{Job204}]27 - 29 \ [\texttt{Job205}]27 - 29 \\ [\texttt{Job205}]27 - 29 \ [\texttt{Job205}]27 - 29 \ [\texttt{Job205}]27 - 29 \ [\texttt{Job205}]27 - 29 \\ [\texttt{Job205}]27 - 29 \ [\texttt{Job205
  (continued) => [Job204]29--31 [Job205]31--33 [Job207]33--35 [Job208]35--37 [Job209]37--39 [Job210]39--41
  (continued) = \\ [Job211]41 - 43 \ [Job212]43 - 45 \ [Job201]45 - 47 \ [Job203]47 - 48 \ [Job204]48 - 50 \ [Job205]50 - 52 \ [Job207]52 - 54 \ [Job207]52 -
  (\texttt{continued}) = \\ [\texttt{Job208}] 54 - - 56 \ [\texttt{Job209}] 56 - - 58 \ [\texttt{Job210}] 58 - - 60 \ [\texttt{Job211}] 60 - - 62 \ [\texttt{Job212}] 62 - - 64 \ [\texttt{Job201}] 64 - - 66 \ [\texttt{Job204}] 66 - - 68 \ ]
    (\texttt{continued}) = \\ [\texttt{Job205}] \\ 68 - 70 \\ [\texttt{Job208}] \\ 70 - 72 \\ [\texttt{Job209}] \\ 72 - 73 \\ [\texttt{Job210}] \\ 73 - 75 \\ [\texttt{Job211}] \\ 75 - 77 \\ [\texttt{Job211}] \\ 77 - 79 \\ [\texttt{Job212}] \\ 77 - 79 \\ [\texttt{Job212
    (\texttt{continued}) = \\ [\texttt{Job201}] 79 - 81 \ [\texttt{Job204}] 81 - 83 \ [\texttt{Job208}] 83 - 85 \ [\texttt{Job210}] 85 - 87 \ [\texttt{Job211}] 87 - 89 \ [\texttt{Job212}] 89 - 90 \ [\texttt{Job201}] 90 - 91 \\ [\texttt{Job201}] 80 - 91 \ [\texttt{Job201}] 80 - 91 \ [\texttt{Job201}] 80 - 91 \ [\texttt{Job201}] 80 - 91 \\ [\texttt{Job201}] 80 - 91 \ [\texttt{Job201}] 80 - 91 \ [\texttt{Job201}] 80 - 91 \ [\texttt{Job201}] 80 - 91 \\ [\texttt{Job201}] 80 - 91 \ [
  (\texttt{continued}) = \\ [\texttt{Job204}]91 - -93 \ [\texttt{Job208}]93 - -95 \ [\texttt{Job210}]95 - -97 \ [\texttt{Job211}]97 - -99 \ [\texttt{Job204}]99 - 100 \ [\texttt{Job208}]100 - -102 \ [\texttt{Job210}]102 - -104 \ [\texttt{Job210}]102 - -1
  (\texttt{continued}) = \\ [\texttt{Job208}] 104 - 105 \ [\texttt{Job210}] 105 - -107 \ [\texttt{Job210}] 107 - -109 \ [\texttt{Job210}] 109 - -111 \ [\texttt{Job210}] 111 - -113 \ [\texttt{Job210}] 113 - 114 \ ]
  (continued) =>
  Ave Processing time = 9.5
  Ave Turnaround time = 73.5
  Average Waiting Time = 64.0
 Round Robin with time slice = 5
  [\texttt{Job201}] 0 -----5 \ [\texttt{Job202}] 5 ----9 \ [\texttt{Job203}] 9 -----14 \ [\texttt{Job204}] 14 -----19 \ [\texttt{Job205}] 19 -----24 \ [\texttt{Job206}] 24 -25 \ [\texttt{Job207}] 25 -----30
  (continued) => [Job208]30----35 [Job209]35----40 [Job210]40----45 [Job211]45----50 [Job212]50----55
  (continued) => [Job210]76----81 [Job211]81----86 [Job212]86----90 [Job201]90-91 [Job204]91---94 [Job208]94----99
  (\texttt{continued}) = \\ \\ [\texttt{Job210}] 99 ----104 \quad [\texttt{Job211}] 104 --106 \quad [\texttt{Job210}] 106 ----111 \quad [\texttt{Job210}] 111 ---114 
Ave Processing time = 9.5
 Ave Turnaround time = 71.25
Average Waiting Time = 61.75
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testdata3.txt
First Come First Serve
 [Job301]0-----55 [Job302]15----20 [Job303]20-----55 [Job304]55-56
   (continued)=> [Job305]56----60 [Job306]60----65 [Job307]65--67 [Job308]67------75 [Job309]75----
   (continued) => [Job310]88-------108 [Job311]108-------124 [Job312]124------133 [Job313]133-----140 (continued) => [Job314]140------154 [Job315]154-------171 [Job316]171------182
   (continued)=> [Job317]182------194 [Job318]194------209 [Job319]209------228 [Job320]228------257
   (continued) =>
Ave Processing time = 12.85
Ave Turnaround time = 120.05
Average Waiting Time = 107.200005
(continued) => [Job320]193------222 [Job303]222-----257
   (continued) =>
 Ave Processing time = 12.85
   Ave Turnaround time = 89.2
   Average Waiting Time = 76.35
   Round Robin with time slice = 2
   [Job301]0--2 [Job302]2--4 [Job303]4--6 [Job304]6-7 [Job305]7--9 [Job306]9--11 [Job307]11--13 [Job308]13--15
     (\texttt{continued}) \Rightarrow [\texttt{Job309}]15 - 17 \ [\texttt{Job310}]17 - 19 \ [\texttt{Job311}]19 - 21 \ [\texttt{Job312}]21 - 23 \ [\texttt{Job313}]23 - 25 \ [\texttt{Job314}]25 - 27 \ [\texttt{Job315}]27 - 29 \ [\texttt{Job315}]27 - 29 \ [\texttt{Job315}]27 - 29 \ [\texttt{Job316}]27 - 29 \ [\texttt{Job316}]
   (\texttt{continued}) = \\ [\texttt{Job316}] 29 - 31 \ [\texttt{Job317}] 31 - 33 \ [\texttt{Job318}] 33 - 35 \ [\texttt{Job319}] 35 - 37 \ [\texttt{Job320}] 37 - 39 \ [\texttt{Job301}] 39 - 41 \\ [\texttt{Job318}] 31 - 30 \ [
   (continued) = \\ [Job302]41 - -43 [Job303]43 - -45 [Job305]45 - -47 [Job306]47 - -49 [Job308]49 - -51 [Job309]51 - -53 [Job310]53 - -55 [Job3
     (\texttt{continued}) \Rightarrow [\texttt{Job311}] 55 - 57 \ [\texttt{Job312}] 57 - 59 \ [\texttt{Job313}] 59 - 61 \ [\texttt{Job314}] 61 - 63 \ [\texttt{Job315}] 63 - 65 \ [\texttt{Job316}] 65 - 67 \ [\texttt{Job317}] 67 - 69
   (continued) => [Job318]69--71 [Job319]71--73 [Job320]73--75 [Job301]75--77 [Job302]77-78 [Job303]78--80
     (\texttt{continued}) = \\ [\texttt{Job306}] 80 - 81 \ [\texttt{Job308}] 81 - 83 \ [\texttt{Job309}] 83 - 85 \ [\texttt{Job310}] 85 - 87 \ [\texttt{Job311}] 87 - 89 \ [\texttt{Job312}] 89 - 91 \ [\texttt{Job313}] 91 - 93 \ [\texttt{Job313}] 91 - 93 \ [\texttt{Job310}] 80 - 91 \ [
     (continued)=> [Job314]93--95 [Job315]95--97 [Job316]97--99 [Job317]99--101 [Job318]101--103 [Job319]103--105
   (continued) = \\ [Job300]105 - -107 \ [Job301]107 - -109 \ [Job303]109 - -111 \ [Job308]111 - -113 \ [Job309]113 - -115 \ [Job310]115 - -117 \ [Job310]115 
   (\texttt{continued}) = \\ [\texttt{Job311}] 117 - \\ -119 \ [\texttt{Job312}] 119 - \\ -121 \ [\texttt{Job313}] 121 - \\ 122 \ [\texttt{Job314}] 122 - \\ -124 \ [\texttt{Job315}] 124 - \\ -126 \ [\texttt{Job316}] 126 - \\ -128 \ [\texttt{Job316}] 127 - \\ -128 \ [
     (continued) => [Job317]128 - 130 \ [Job318]130 - 132 \ [Job319]132 - 134 \ [Job320]134 - 136 \ [Job301]136 - 138 \ [Job303]138 - 140 \ [Job301]136 - 130 \ [Job301]136 - 130 \ [Job301]138 - 140 \ [Job301]130 - 130 \ [Job301]1
     (\texttt{continued}) = \\ [\texttt{Job309}]140 - 142 \ [\texttt{Job310}]142 - 144 \ [\texttt{Job311}]144 - 146 \ [\texttt{Job312}]146 - 147 \ [\texttt{Job314}]147 - 149 \ [\texttt{Job315}]149 - 151 \ [\texttt{Job316}]149 - 140 \ [
   (continued) => [Job316]151--153 [Job317]153--155 [Job318]155--157 [Job319]157--159 [Job320]159--161 [Job301]161--163
     (\texttt{continued}) = \\ [\texttt{Job303}] 163 - \\ 165 [\texttt{Job309}] 165 - \\ 167 [\texttt{Job310}] 167 - \\ 169 [\texttt{Job311}] 169 - \\ 171 [\texttt{Job314}] 171 - \\ 173 [\texttt{Job315}] 173 - \\ 175 [\texttt{Job315
   (\texttt{continued}) = \\ [\texttt{Job316}] 175 - 176 \ [\texttt{Job317}] 176 - -178 \ [\texttt{Job318}] 178 - -180 \ [\texttt{Job319}] 180 - -182 \ [\texttt{Job320}] 182 - -184 \ [\texttt{Job301}] 184 - -186 \ [\texttt{Job316}] 175 - 186 \ [\texttt{J
     (continued)=> [Job303]186--188 [Job309]188-189 [Job310]189--191 [Job311]191--193 [Job314]193--195 [Job315]195--197
   (\texttt{continued}) = \\ [\texttt{Job318}] 197 - \\ -199 [\texttt{Job319}] 199 - \\ -201 [\texttt{Job320}] 201 - \\ -203 [\texttt{Job301}] 203 - \\ 204 [\texttt{Job303}] \\ 204 - \\ -206 [\texttt{Job310}] \\ 206 - \\ -208 [\texttt{Job310}] \\ 206 - \\ -208 [\texttt{Job310}] \\ 207 - \\ -208 [\texttt{Job310
   (\texttt{continued}) = \\ [\texttt{Job311}] 208 - \\ 210 \ [\texttt{Job315}] 210 - \\ 212 \ [\texttt{Job318}] 212 - \\ 213 \ [\texttt{Job319}] 213 - \\ 215 \ [\texttt{Job320}] 215 - \\ 217 \ [\texttt{Job303}] 217 - \\ 219 \ [\texttt{Job311}] 210 - \\ 219 \ [\texttt{Job311}] 210 - \\ 210 \ [\texttt{Job311}] 210 - \\ 210
   (continued) => [Job310]219--221 [Job315]221-222 [Job319]222--224 [Job320]224--226 [Job303]226--228 [Job310]228--230
   (\texttt{continued}) = \\ [\texttt{Job319}] 230 - 231 \ [\texttt{Job320}] 231 - -233 \ [\texttt{Job303}] 233 - -235 \ [\texttt{Job320}] 235 - -237 \ [\texttt{Job303}] 237 - -239 \ [\texttt{Job320}] 239 - -241 \\ [\texttt{Job319}] 230 - 231 \ [\texttt{Job320}] 231 - -231 \ [\texttt
   (\texttt{continued}) = \\ [\texttt{Job303}] 241 - - 243 \ [\texttt{Job320}] 243 - - 245 \ [\texttt{Job303}] 245 - - 247 \ [\texttt{Job320}] 247 - - 249 \ [\texttt{Job303}] 249 - - 251 \\ [\texttt{Job303}] 249 - - 251
   (\texttt{continued}) = \\ [\texttt{Job320}] 251 - 252 \ [\texttt{Job303}] 252 - -254 \ [\texttt{Job303}] 254 - -256 \ [\texttt{Job303}] 256 - 257 \\ ]
   Ave Processing time = 12.85
   Ave Turnaround time = 158.25
   Average Waiting Time = 145.4
   Round Robin with time slice = 5
   [\texttt{Job301}] 0 -----5 \ [\texttt{Job302}] 5 -----10 \ [\texttt{Job303}] 10 -----15 \ [\texttt{Job304}] 15 -16 \ [\texttt{Job305}] 16 ----20 \ [\texttt{Job306}] 20 -----25 \ [\texttt{Job307}] 25 --27
     (continued)=> [Job308]27----32 [Job309]32----37 [Job310]37----42 [Job311]42----47 [Job312]47----52
   (\texttt{continued}) \Rightarrow [\texttt{Job313}] 52 ----57 \ [\texttt{Job314}] 57 ----62 \ [\texttt{Job315}] 62 ----67 \ [\texttt{Job316}] 67 ----72 \ [\texttt{Job317}] 72 ----77 \ [\texttt{Job318}] 77 ----82
   (\texttt{continued}) = \\ [\texttt{Job319}] 82 ---- 87 \ [\texttt{Job320}] 87 ---- 92 \ [\texttt{Job301}] 92 ---- 97 \ [\texttt{Job303}] 97 ---- 102 \ [\texttt{Job308}] 102 --- 105 \ [\texttt{Job319}] 102 --- 102 \ 
     (continued) => [Job311]179----184 [Job314]184----188 [Job315]188----193 [Job316]193-194 [Job317]194--196
   (continued)=> [Job318]196----201 [Job319]201----206 [Job320]206----211 [Job303]211----216 [Job310]216----221
     (\texttt{continued}) = \\ [\texttt{Job311}] 221 - 222 \ [\texttt{Job315}] 222 - -224 \ [\texttt{Job319}] 224 - --- \\ 228 \ [\texttt{Job320}] 228 - --- \\ 233 \ [\texttt{Job303}] 233 - --- \\ 238 \ [\texttt{Job303}] 233 - --- \\ 238 \ [\texttt{Job311}] 221 - 222 \ [\texttt{Job315}] \\ 222 - 224 \ [\texttt{Job319}] \\ 224 - --- \\ 228 \ [\texttt{Job320}] \\ 228 - --- \\ 230 \ [\texttt{Job303}] \\ 233 - --- \\ 238 \ [\texttt{Job303}] \\ 234 - --- \\ 238 \ [\texttt{Job303}] \\ 
     (continued)=> [Job320]238----243 [Job303]243----248 [Job320]248---252 [Job303]252----257
   Ave Processing time = 12.85
   Ave Turnaround time = 148.8
```

Average Waiting Time = 135.95