

```

1 -For the game
2     -No class
3     -Everything in MainSimulator.java
4         -UI (Ben)
5         -Figure out the math (Aaron)
6         -Find images (Adam)
7 -Extra features
8     -SQL (Andrew)
9         -Server creation (Ben)
10    -Special events (Aaron and Adam)
11    -Chat window (Andrew)
12    -Games (Stratego)
13    -Sliders (Ben)
14
15 Code architecture
16     -MainSimulator extends PApplet
17         -MainSimulator()
18             -Build frame?
19             -Adds additional non-processing GUI Elements?
20     -main()
21         -Calls processing main
22         -Launch communication server thread
23         -Launch SQL Thread
24     -settings()
25         -specify window size
26     -setup()
27         -creates window
28         -sets initial values
29         -adds static UI elements (text fields, buttons,
30         etc)
31         -first face
32     -draw()
33         -updates the face
34         -Show command line SQL
35     -button action methods
36         -update values when buttons are pressed
37         -Send SQL Queries
38     Note: We are not making functions to create buttons,
39     sliders, etc. Instead we are using the controlP5 processing
40     library to create editable text fields and buttons.
41
42 Data
43 final float BASE_HAPPINESS = 50 // Base happiness, run
44     weekly to populate happyWeekly
45 final float BASE_WEALTH = 0 // Base wealth, run weekly to
46     populate wealthWeekly
47 final float BASE_GRADE_POTENTIAL = 90 // Base grade
48     potential, run weekly to populate gradeWeekly
49 final float HOURS_MAX = 160 // Hours maximum, total of all
50     numbers cannot exceed this
51
52 float wealthWeekly // wealth earned weekly, stored after
53     week in wealthTotal
54 float wealthTotal // total wealth accrued

```

```

49
50 float happyWeekly // happiness modifier weekly, stored in
   happySum after week
51 float happySum // stores sum of all happiness modifiers
52 float happyAverage // takes average of happySum and
   produces a number
53
54 float gradeWeekly // grade potential modifier, stored in
   gradeSum after week
55 float gradeSum // stores values of weekly grade potentials
56 float gradeAverage // averages gradeSum and produces a
   number
57
58 int creditHours //
59     Amount of credits taken by user, run once
60     Range: 12 - 24
61     Will decrease happyWeekly by 5/4% per credit over 12
62     Will decrease gradeWeekly by 1.5% over after 12 credits
63     Over twelve credits gives flat $1000 to wealthTotal
64
65 int workHours //
66     Weekly selection of work hours, selected by user
67     Range: 0 - 40
68     Up to 20 hours decreases happyWeekly by .5% per hour
69     Over 20 hours decreases happyWeekly amount by 1% per
   hour
70     gradeWeekly decreases over 20 hours by .5% per hour
71     Gives $5 to wealthWeekly per hour
72     If player achieves $55 in a week, gives flat happyWeekly
   bonus of 5%
73
74 int classTime //
75     Weekly selection of active class time, selected by user
76     Range: 0 - credits
77     Decreases happyWeekly by 1% per hour
78     Increases gradeWeekly by .5% per hour
79
80 int studyTime //
81     Weekly selection of amount of time spent studying,
   selected by user
82     Range: 0 - 2x credits
83     Increases gradeWeekly by .5% per hour
84     Decreases happyWeekly by .5% per hour
85
86 int academicVisit //
87     Weekly selection of use of academic centers, selected by
   user
88     Range: 0 - .5x studyTime
89     Increases gradeWeekly by .5% per hour
90     Decreases happyWeekly by .5% per hour
91
92 int partyTime //
93     Weekly selection of leisure time, selected by user
94     Range: 0 - (HOURS_MAX - (credits - jobHours - classTime
   - studyTime - academicVisit))

```

```
95   Increases happyWeekly by 3% per hour
96   Decreases gradeWeekly by 3% per hour
97   Decreases wealthWeekly by $7 per hour, if wealthWeekly
    would be negative, pulls from wealthTotal, if wealthTotal
    is empty, happyWeekly = .5%)
98   If no leisure time is taken, gradeWeekly reduced
    severely (50%)
99
100
101
102
103
104
105
106
107
```