

VG100 — Introduction to Engineering

Project 1 Report (Team 9)

Rubric

- Game Design (10 pts)
- Code Quality (50 pts)
- Readme (15 pts)
- Personal work (20 pts)

1 Game Design

Not included in this report.

2 Code Quality

Your total score of this part is 44/50.

All related information is listed below:

1 point(s) **deduction**, too long function, in file [Game.elm](#), lines [220-342](#).

```
220  initialList : Float -> Float -> Grid -> Int -> Int -> Int -> Int -> Bool -> Seed -> Int -> Grid
221  initialList wid hei grid i_temp j_temp i_max j_max shape bomb seed level =
222
223  let
224      (num,newSeed) =
225          if bomb then
226              Random.step (Random.int 0 (List.length col_bank - 1)) seed
227          else
228              Random.step (Random.int 3 (List.length col_bank - 1)) seed
229
...
333      newBlock::grid
334  in
335
336
337  if i_temp == i_max && j_temp == j_max then
338      newGrid
339  else if j_temp == j_max then
340      initialList wid hei newGrid (1 + i_temp) 0 i_max j_max shape bomb newSeed level
341  else
342      initialList wid hei newGrid i_temp (1 + j_temp) i_max j_max shape bomb newSeed level
```

1 point(s) **deduction**, duplicate code, in file [Shape.elm](#), lines [140-217](#).

```
140  0->
141  Svg.image [ SvgAttrs.x ((String.fromFloat (x - rad/2)))
142              , SvgAttrs.y ("-" ++ (String.fromFloat (y + rad/2)))
143              , SvgAttrs.height (String.fromFloat (rad))
144              , SvgAttrs.width (String.fromFloat (rad))
145              , xlinkHref "picture/bomb.png"
```

```

146         ]
147     []
148 2->
149     Svg.image [ SvgAttrs.x ((String.fromFloat (x - rad/2)))
...
208     ]
209     []
210 ->
211     Svg.image [ SvgAttrs.x ((String.fromFloat (x - rad/2)))
212                 , SvgAttrs.y ("-" ++ (String.fromFloat (y + rad/2)))
213                 , SvgAttrs.height (String.fromFloat (rad))
214                 , SvgAttrs.width (String.fromFloat (rad))
215                 , xlinkHref "picture/dsoldier.png"
216             ]
217     []

```

1 point(s) deduction, duplicate code, in file [Update.elm](#), lines 155-178.

```

155 boardLeft : Bool -> Model -> Model
156 boardLeft on model =
157     case model of
158         Game gamemodel music->
159             let
160                 newBoard =
161                     Board gamemodel.bod.col gamemodel.bod.vel gamemodel.bod.wid gamemodel.bod.hei gamemodel.bod.x
162                     ↪ gamemodel.bod.y on False
163             in
164                 Game { gamemodel | bod = newBoard } music
165 ->
166     model
167
168 boardRight : Bool -> Model -> Model
169 boardRight on model =
170     case model of
171         Game gamemodel music->
172             let
173                 newBoard =
174                     Board gamemodel.bod.col gamemodel.bod.vel gamemodel.bod.wid gamemodel.bod.hei gamemodel.bod.x
175                     ↪ gamemodel.bod.y False on
176             in
177                 Game { gamemodel | bod = newBoard } music
178 ->
179     model

```

1 point(s) deduction, too long function, in file [Update.elm](#), lines 194-347.

```

194 moveBall : (GameModel, List Ball) -> (GameModel, List Ball)
195 moveBall (model, newball)=
196     let
197         ball =
198             Maybe.withDefault ball_rome (List.head model.bal)
199
200     remain =

```

```

201         List.drop 1 model.bal
202
203     bal__ =
204
205     ...
206
207     __ ->
208         if fastBall.y > -model.hei then
209             (List.append newball [fastBall], switch , skill)
210         else
211             (newball, switch , skill)
212
213 in
214 if List.length remain > 0 then
215     moveBall ({ model | lis = lis____, bal = remain ,see=see__, ski=nskill, swt=nswitch, bod=bigboard }, ballList)
216 else
217     ({ model | lis = lis____, bal = ballList ,see=see__, ski=nskill, swt=nswitch, bod=bigboard },ballList)

```

1 point(s) deduction, duplicate code, in file [View.elm](#), lines 220-259.

```

220 [ button
221   [ style "height" "10%"
222     , style "width" "10%"
223     , style "bottom" "15%"
224     , style "left" "18%"
225     , style "background" "url(picture/Rome.jpg) 0% 0% / 100% 100%"
226     , style "background-repeat" "no-repeat"
227     , style "border" "none"
228     , style "position" "absolute"
229     , style "cursor" "pointer"
230
231   ...
232
233   , style "width" "10%"
234   , style "bottom" "15%"
235   , style "left" "73%"
236   , style "background" "url(picture/Goth.jpg) 0% 0% / 100% 100%"
237   , style "background-repeat" "no-repeat"
238   , style "border" "none"
239   , style "position" "absolute"
240   , style "cursor" "pointer"
241   , style "opacity" opaGoth
242   , onClick CGoth

```

1 point(s) deduction, hard coded, in file [View.elm](#), lines 297-319.

```

297 skill =
298     case con of
299         Rome ->
300             "Smash (Attack Skill): Your next attack will kill the enemy and random enemies around it."
301         Persia ->
302             "Bulk up (Defense Skill): You will have a stronger board for the duration."
303         Goth ->
304             "Double team (Survival Skill): You will get one more weapon (ball)."
305         __ -> ""
306
307 txt =

```

308 case con of
309 Rome ->
310 "The Eastern Roman Empire, also referred to as the Byzantine Empire. Its capital city was Constantinople. During
→ most of its existence, the empire was the most powerful economic, cultural, and military force in Europe.
→ About the sixth century AD, the empire reached its greatest extent, after reconquering much of the
→ historically Roman western Mediterranean coast, including North Africa, Italy and Rome, which it held for
→ two more centuries."
311
312 Persia ->
313 "The Sasanian Empire, endured for over four centuries, from 224 to 651 AD, making it the longest-lived Persian
→ dynasty. The Sasanian Empire succeeded the Parthian Empire, and reestablished the Iranians as a
→ superpower. It is recognized as one of the leading world powers in late antiquity, alongside its neighbouring
→ arch-rival, the Roman-Byzantine Empire."
314
315 Goth ->
316 "The Visigoths were an early Germanic people who along with the Ostrogoths constituted the two major political
→ entities of the Goths within the Roman Empire in Late Antiquity. The Visigoths emerged from earlier Gothic
→ groups, who had moved into the Roman Empire beginning in 376 and had played a major role in defeating the
→ Romans at the Battle of Adrianople in 378."
317
318 No ->
319 ""

2 point(s) **bonus**, some documentations found.

2 point(s) **deduction**, bad code format.

3 Readme

Not included in this report.

4 Personal work

Not included in this report.