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 -> 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
                      ↪   gamemodel.bod.y on False
162             in
163             Game { gamemodel | bod = newBoard } music
164          _ ->
165             model
166
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
                      ↪   gamemodel.bod.y False on
175             in
176             Game { gamemodel | bod = newBoard } music
177          _ ->
178             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 =
```

2

```
201              List.drop 1 model.bal
202
203         bal__=
```

...

```
338              _ ->
339                 if fastBall.y > -model.hei then
340                    (List.append newball [fastBall], switch , skill)
341                 else
342                    (newball, switch , skill)
343      in
344         if List.length remain > 0 then
345            moveBall ({ model | lis = lis____, bal = remain ,see=see__, ski=nskill, swt=nswitch, bod=bigboard }, ballList)
346         else
347            ({ 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"
```

...

```
250            , style "width" "10%"
251            , style "bottom" "15%"
252            , style "left" "73%"
253            , style "background" "url(picture/Goth.jpg)  0% 0% / 100% 100%"
254            , style "background-repeat" "no-repeat"
255            , style "border" "none"
256            , style "position" "absolute"
257            , style "cursor" "pointer"
258            , style "opacity" opaGoth
259            , 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.