VG100 — Introduction to Engineering

Project 1 Report (Team 11)

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 36/50.

All related information is listed below:

1 point(s) deduction, duplicate code and hard-coded contents, in file Model.elm, lines 597-677.

```
597    initialBlock0: List Block
598    initialBlock0 =
599        List.map (changeBlockType BrickVertex) [ initialOneBlock (466,184)]
600
601    initialBlock1: List Block
602    initialBlock1 =
603        List.map (changeBlockType BrickBrown)[ initialOneBlock (430,220), initialOneBlock (394,256), initialOneBlock (502,220),
            ↪    initialOneBlock (538,256)]
604
605    initialBlock2: List Block
606    initialBlock2 =

...

668    initialBlock16 =
669         List.map (changeBlockType BrickWhite)[ initialOneBlock (358,412),initialOneBlock (574,412)]
670
671    initialBlock17: List Block
672    initialBlock17 =
673        List.map (changeBlockType BrickBrown)[ initialOneBlock (394,448),initialOneBlock (430,484),initialOneBlock
            ↪    (538,448),initialOneBlock (502,484)]
674
675    initialBlock18: List Block
676    initialBlock18 =
677        List.map (changeBlockType BrickVertex)[ initialOneBlock (466,520)]
```

1 point(s) deduction, duplicate code and hard-coded contents, in file StoryBoard.elm, lines 183-216.

```
183            step1 =
184                initialBlockType 17 Accelerate original
185
186            step2 =
```

```elm
187              initialBlockType 18 Decelerate step1
188
189         step3 =
190              initialBlockType 50 Accelerate step2
191         step4 =
192              initialBlockType 49 Decelerate step3
```

…

```elm
207              initialBlockType 32 Accelerate step8
208
209         step10 =
210              initialBlockType 33 Accelerate step9
211
212         step11 =
213              initialBlockType 34 Accelerate step10
214
215         step12 =
216              initialBlockType 35 Accelerate step11
```

1 point(s) deduction, duplicate code, in file Update.elm, lines 227-332.

```elm
227    accelerationAction : Ball -> Collision -> Ball
228    accelerationAction ball collision =
229        case collision of
230           TopLeftBlocks ->
231              if ball.vx * ball.vy <0 then
232                 { ball | vx = 1.5*ball.vx / (abs ball.vx) * (abs ball.vy), vy =1.5* ball.vy / (abs ball.vy) * (abs ball.vx)}
233              else
234                 { ball | vx = 1.5*(-ball.vx) / (abs ball.vx) * (abs ball.vy), vy = 1.5*(-ball.vy )/ (abs ball.vy) * (abs ball.vx)}
235
236           BottomRightBlocks ->
```

…

```elm
323                    { ball | vx = -ball.vx, vy = -ball.vy}
324                 else
325                    { ball | vx = ball.vx / (abs ball.vx) * (abs ball.vy), vy = ball.vy / (abs ball.vy) * (abs ball.vx)}
326           TopRightBlocks ->
327                 if ball.vx * ball.vy <0 then
328                    { ball | vx = -ball.vx / (abs ball.vx) * (abs ball.vy), vy = -ball.vy / (abs ball.vy) * (abs ball.vx)}
329                 else
330                    { ball | vx = ball.vx / (abs ball.vx) * (abs ball.vy), vy = ball.vy / (abs ball.vy) * (abs ball.vx)}
331           _ ->
332              ball
```

1 point(s) deduction, duplicate code, in file Update.elm, lines 411-474.

```elm
411           TopLeftBlocks ->
412              let
413                 ball =
414                    model.ball
415
416                 updatedball =
417                    blockCollisionAction model.block ball TopLeftBlocks
418
419                 updatedblock =
420                    List.filter (\singleBlock -> not (checkBlockCollision1 ball singleBlock)|| singleBlock.blocktype == Immortal1
```

...

```
465            let
466                ball =
467                    model.ball
468
469                updatedball =
470                    blockCollisionAction model.block ball TopRightBlocks
471
472                updatedblock =
473                    List.filter (\singleBlock -> not (checkBlockCollision4 ball singleBlock)|| singleBlock.blocktype == Immortal1
474                        || singleBlock.blocktype == Immortal2) model.block
```

1 point(s) deduction, duplicate code, in file Update.elm, lines 681-695.

```
681    checkBlocksCollision1 : Ball -> List Block -> Bool
682    checkBlocksCollision1 ball blocks =
683        List.any (checkBlockCollision1 ball) blocks
684
685    checkBlocksCollision2 : Ball -> List Block -> Bool
686    checkBlocksCollision2 ball blocks =
687        List.any (checkBlockCollision2 ball) blocks
688
689    checkBlocksCollision3 : Ball -> List Block -> Bool
690    checkBlocksCollision3 ball blocks =
691        List.any (checkBlockCollision3 ball) blocks
692
693    checkBlocksCollision4 : Ball -> List Block -> Bool
694    checkBlocksCollision4 ball blocks =
695        List.any (checkBlockCollision4 ball) blocks
```

1 point(s) deduction, duplicate code, in file View.elm, lines 66-231.

```
66    renderGameMode : Html Msg
67    renderGameMode =
68        button
69            [ style "background" "#000000"
70            , style "border" "20"
71            , style "bottom" "300px"
72            , style "color" "#018fce"
73            , style "cursor" "pointer"
74            , style "display" "block"
75            , style "font-family" "Helvetica, Arial, sans-serif"
```

...

```
222            , style "height" "60px"
223            , style "left" "8px"
224            , style "line-height" "60px"
225            , style "outline" "none"
226            , style "padding" "0"
227            , style "position" "absolute"
228            , style "width" "80px"
229            , onClick previousMsg
230            ]
231            [ text "Back" ]
```

1 point(s) deduction, duplicate code, in file View.elm, lines 262-336.

```elm
262   viewBlock1 : Block -> Html msg
263   viewBlock1 block =
264       img
265           [ src
              ↪   "http://r.photo.store.qq.com/psc?/V14EmBeb3D256g/Tiy10*PRF5enyWrLfdcKz0rAuc.FGosXHS4imSc1BsZEzCxnKrX*lWL.ONtIkq
266           , style "left" <| String.fromFloat block.x ++ "px"
267           , style "top" <| String.fromFloat block.y ++ "px"
268           , style "position" "absolute"
269           ]
270           []
271

      ...

327
328   viewBlockStageClear : Block -> Html msg
329   viewBlockStageClear block =
330       img
331           [ src "https://ae01.alicdn.com/kf/H69a74a1a219345faaa88060ca88d9ad5f.jpg"
332           , style "left" <| String.fromFloat block.x ++ "px"
333           , style "top" <| String.fromFloat block.y ++ "px"
334           , style "position" "absolute"
335           ]
336           []
```

1 point(s) deduction, duplicate code, in file View.elm, lines 339-392.

```elm
339   viewDescription : String -> Html msg
340   viewDescription txt =
341       div
342           [ style "color" "#34495f"
343           , style "font-size" "30px"
344           , style "line-height" "0px"
345           , style "margin" "30px 0 0"
346           , style "right" "570px"
347           , style "top" "400px"
348           , style "position" "absolute"

      ...

383       div
384           [ style "color" "#34495f"
385           , style "font-size" "30px"
386           , style "line-height" "0px"
387           , style "margin" "30px 0 0"
388           , style "right" "495px"
389           , style "top" "450px"
390           , style "position" "absolute"
391           ]
392           [ text txt ]
```

1 point(s) deduction, too long function and duplicate code, in file View.elm, lines 645-913.

```elm
645    view model =
646        let
647            block =
648                List.map viewSingleBlock model.block
649
650            elements =
651                [ {- viewWindow model.window, -} viewPaddle model.paddle, viewBall model.ball ]
652        in
653        case model.mode of
654            Random ->
```

…

```elm
904
905                4 ->
906                    storyGeneralBoard model "https://ae01.alicdn.com/kf/H7a4b70a85ac0487aba65f5c0c74f3126U.jpg"
907
908                --storyending.png
909                _ ->
910                    div [] []
911
912
913
```

2 point(s) deduction, elm-stuff in git repo.

2 point(s) deduction, assets mixed with source files.

1 point(s) deduction, too many undeleted code.

3 Readme

Not included in this report.

4 Personal work

Not included in this report.