Grade calculator

```
library(tidyverse)
```

Input grades

Input all of your grades below:

```
#input HW grades (out of 50 points)
hw01 <- 50
hw02 <- 50
hw03 <- 50
hw04 <- 50
hw05 <- 50
stat_exp <- 50
```

```
#input lab grades (out of 50 points)
lab01 <- 50
lab02 <- 50
lab03 <- 50
lab04 <- 50
lab05 <- 50
lab06 <- 50
lab07 <- 50
lab08 <- 50
```

```
# input  quiz grades
quiz01 <- 50 # out of 50
quiz02 <- 40 # out of 40
quiz03 <- 40 # out of 40
```

```
#input project grades
topic_ideas <- 5
proposal <- 10
peer_review <- 10
written_report <- 40
slides_video <- 25
reproducibility <- 5
video_comments <- 5
peer_teamwork <- 5
```

```
#participation + team feedback
ae_participation <- 100 #out of 100
team_feedback01 <- 10 #out of 10
team_feedback02 <- 10 # out of 10
```

DO NOT CHANGE ANY CODE BELOW THIS POINT!

Calculate averages

HW average

```
#combine HW scores
hw <- tibble(hw01, hw02, hw03 , hw04, hw05, stat_exp) %>%
  pivot_longer(cols = everything(),
               names_to = "hw",
               values_to = "score")
```

```
# calculate HW average
hw_avg <- hw %>%
  arrange(score) %>%
  slice(-1) %>% #drop lowest HW grade
  summarise(mean = mean(score) * 2) %>% pull()
```

HW average: 100

Lab average

```
#combine lab scores
labs <- tibble(lab01, lab02, lab03, lab04, lab05, lab06, lab07, lab08) %>%
  pivot_longer(cols = everything(),
               names_to = "lab",
               values_to = "score")
```

```
# calculate lab average
lab_avg <- labs %>%
  arrange(score) %>%
  slice(-1) %>% #drop lowest HW grade
  summarise(mean = mean(score) * 2) %>% pull()
```

Lab average: 100

Quiz average

```
# combine quiz scores
quizzes <- tibble(quiz01/50, quiz02/40, quiz03/40) %>%
  pivot_longer(cols = everything(),
               names_to = "quiz",
               values_to = "score")
```

```
# combine quiz averages
quiz_avg <- quizzes %>%
  arrange(score) %>%
```

```
  mutate(weight = c(0.15, 0.35, 0.5),
         points = score * weight) %>%
  summarise(quiz_avg = sum(points) * 100) %>% pull()
```

Quiz average: 100

Project grade

```
# calculate project points
project_points <- sum(c(topic_ideas, proposal, peer_review, written_report, slides_video,
                        reproducibility, video_comments, peer_teamwork))

project_grade <- project_points / 105 * 100
```

Project grade: 100

Participation

```
# calculate team feedback points
team_feedback_avg <- mean(c(team_feedback01, team_feedback02)) * 10

participation_avg <- mean(c(ae_participation, team_feedback_avg))
```

Participation: 100

Calculate overall course average

```
course_avg <- quiz_avg * 0.30 +
  hw_avg * 0.3 +
  project_grade * 0.2 +
  lab_avg * 0.15 +
  participation_avg * 0.05
```

Course average: 100

Summary

- **HW average (weight: 30%):** 100
- **Lab average (weight: 15%):** 100
- **Quiz average (weight: 30%):** 100
- **Project grade (weight: 20%) :** 100
- **Participation (weight: 5%)**: 100
- **Course average**: 100