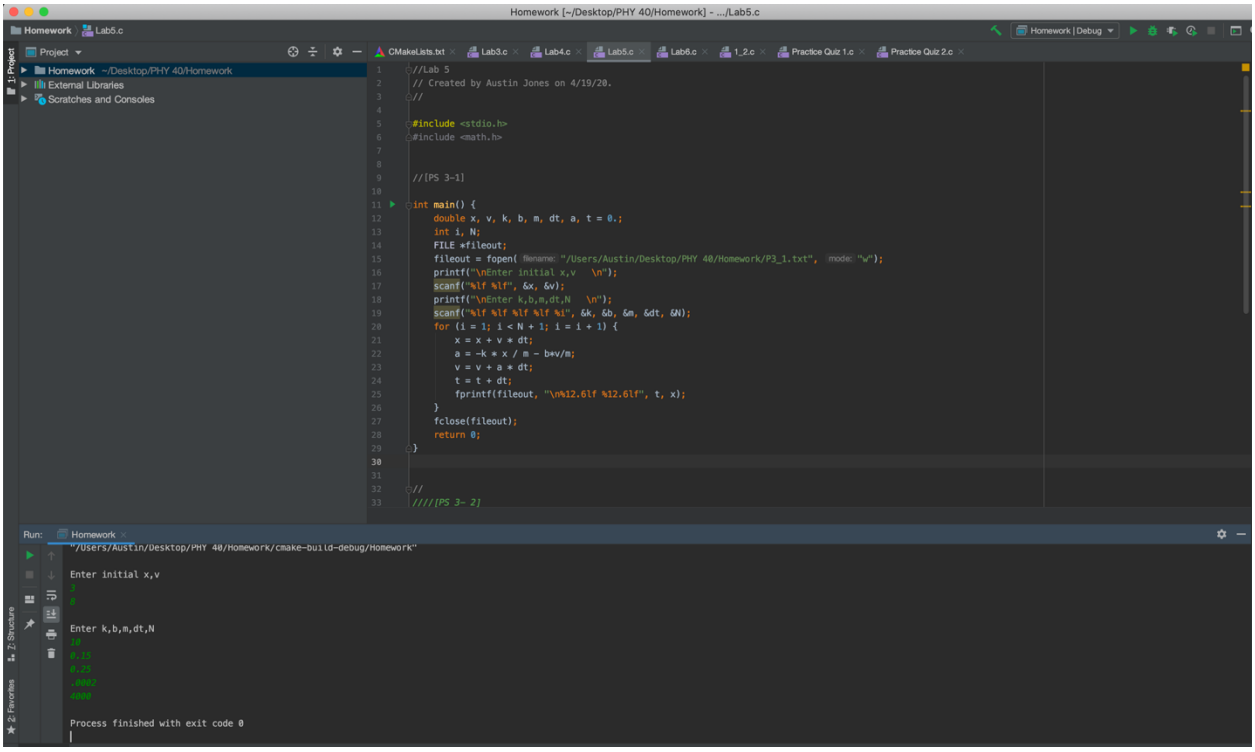
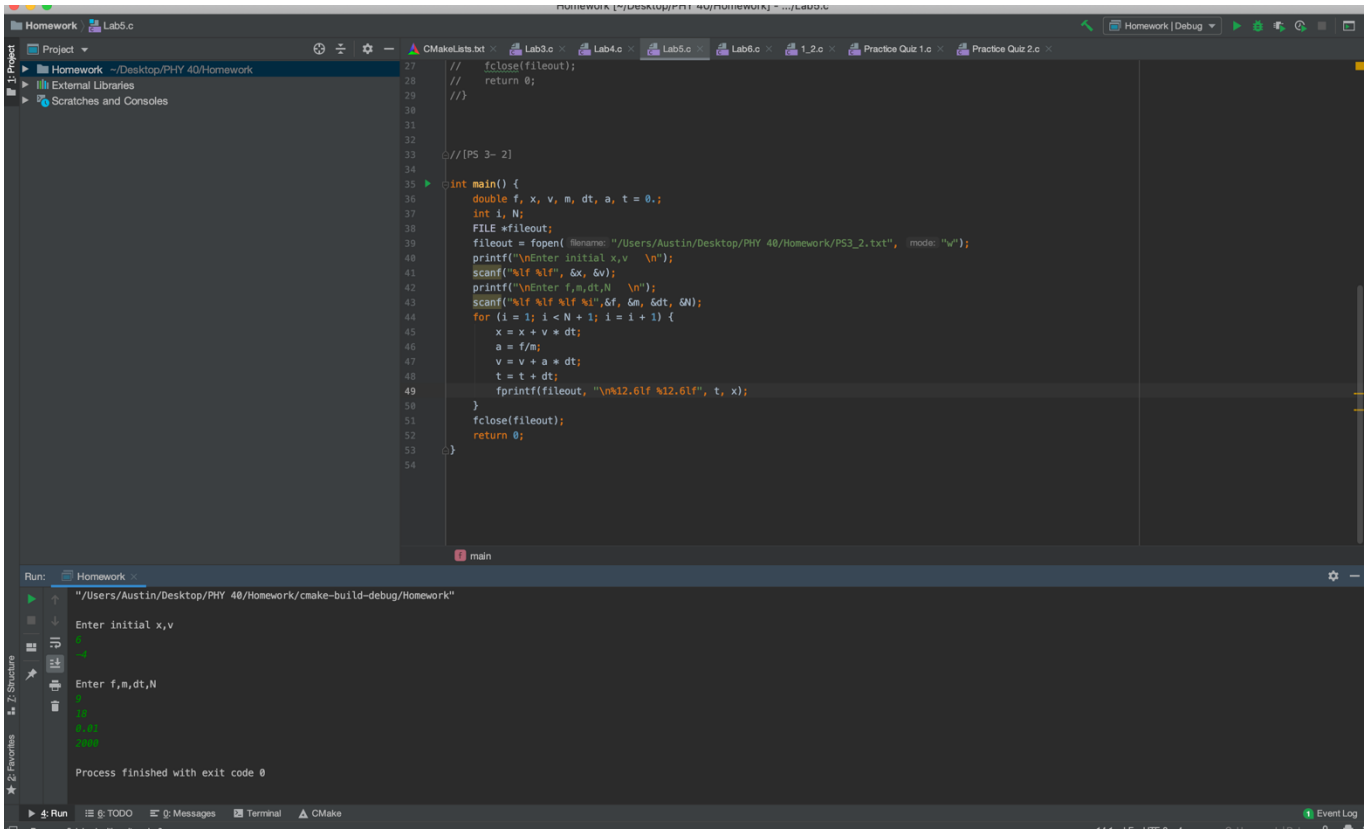
PS [3-1]

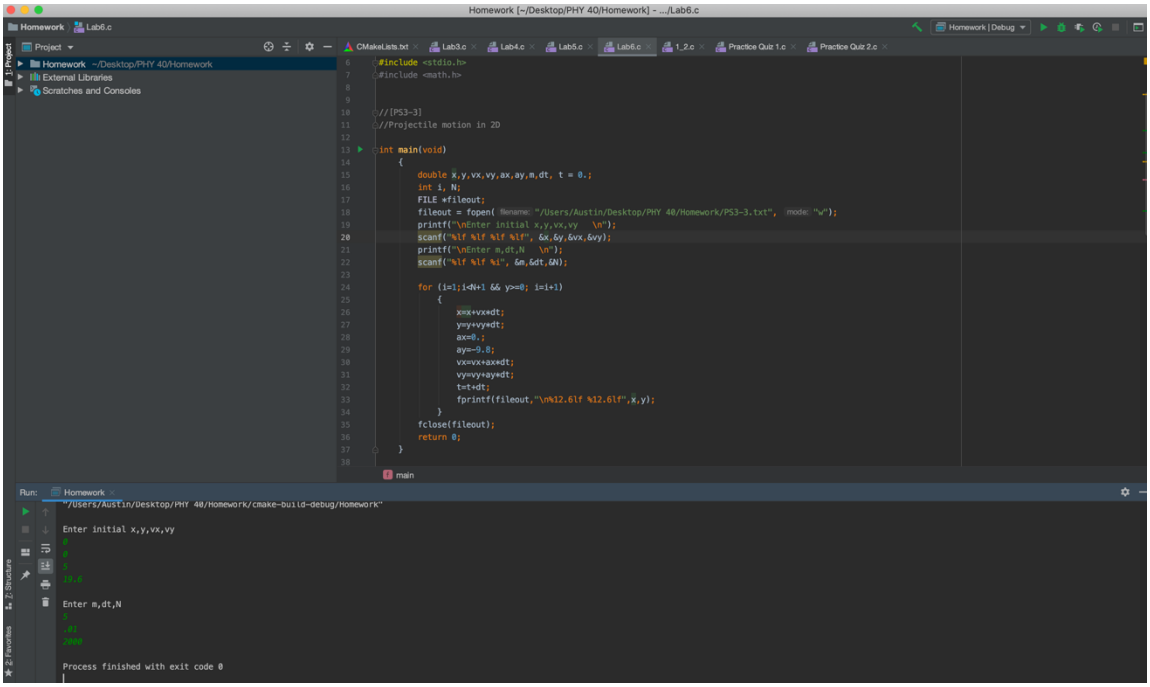

Homework [~/Desktop/PHY 40/Homework] - .../Lab5.c
Homework | Lab5.c
Homework | Debug
Project
Homework ~/Desktop/PHY 40/Homework
External Libraries
Scratches and Consoles
CMakeLists.txt
Lab3.c
Lab4.c
Lab5.c
Lab6.c
1_2.c
Practice Quiz 1.c
Practice Quiz 2.c
//Lab 5
// Created by Austin Jones on 4/19/20.
//
#include <stdio.h>
#include <math.h>
//[PS 3-1]
int main() {
double x, v, k, b, m, dt, a, t = 0.;
int i, N;
FILE *fileout;
fileout = fopen(filename: "/Users/Austin/Desktop/PHY 40/Homework/P3_1.txt", mode: "w");
printf("\nEnter initial x,v \n");
scanf("%lf %lf", &x, &v);
printf("\nEnter k,b,m,dt,N \n");
scanf("%lf %lf %lf %lf %i", &k, &b, &m, &dt, &N);
for (i = 1; i < N + 1; i = i + 1) {
x = x + v * dt;
a = -k * x / m - b*v/m;
v = v + a * dt;
t = t + dt;
fprintf(fileout, "\n%12.6lf %12.6lf", t, x);
}
fclose(fileout);
return 0;
}
//
////[PS 3- 2]
Run:
Homework
"/Users/Austin/Desktop/PHY 40/Homework/cmake-build-debug/Homework"
Enter initial x,v
1
0
Enter k,b,m,dt,N
10
0.15
0.25
.0002
4000
Process finished with exit code 0

[PS 3-2]


Homework | Lab5.c
Homework | Debug
Project
Homework ~/Desktop/PHY 40/Homework
External Libraries
Scratches and Consoles
CMakeLists.txt
Lab3.c
Lab4.c
Lab5.c
Lab6.c
1_2.c
Practice Quiz 1.c
Practice Quiz 2.c
//   fclose(fileout);
//   return 0;
//}
//[PS 3- 2]
int main() {
double f, x, v, m, dt, a, t = 0.;
int i, N;
FILE *fileout;
fileout = fopen(filename: "/Users/Austin/Desktop/PHY 40/Homework/PS3_2.txt", mode: "w");
printf("\nEnter initial x,v \n");
scanf("%lf %lf", &x, &v);
printf("\nEnter f,m,dt,N \n");
scanf("%lf %lf %lf %i",&f, &m, &dt, &N);
for (i = 1; i < N + 1; i = i + 1) {
x = x + v * dt;
a = f/m;
v = v + a * dt;
t = t + dt;
fprintf(fileout, "\n%12.6lf %12.6lf", t, x);
}
fclose(fileout);
return 0;
}
main
Run:
Homework
"/Users/Austin/Desktop/PHY 40/Homework/cmake-build-debug/Homework"
Enter initial x,v
0
-4
Enter f,m,dt,N
9
18
0.01
2000
Process finished with exit code 0
4: Run
6: TODO
0: Messages
Terminal
CMake
Event Log

[PS 3-3]

For m = 5



For m = 7