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#include <stdio.h>
#include <time.h>

/*
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	Class: CS 125
	Assignment: Homework 4
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*/

int main()
{
	// initializing vars

	//given values
	int fp_distance = 0;
	int fp_error = 5;
	int elevation = 38000;
	int timeTo = 10;

	// misc vars

	int loop = 1;
	int course = 0;
	int randAct = 0;


	// 1 game tick = 1 second real time


	// program loop

	while(loop != 0)
	{
		// loop varaible initialization

		srand(time(0));
		fp_distance = (rand() % 21) + 50;

		printf("STARTING SIMULATION \n Distance from course: %d \n",
fp_distance);

		// simulation of 10 seconds of flight

		for(timeTo = 10; timeTo > 0; timeTo--)
		{
			printf("Enter 1 to correct course, and a different value to
continue: \n");
			scanf("%d", &course);

			srand(time(0));
			randAct = (rand() % 25) + 1;

			if(course == 1)
			{
				fp_distance = (fp_distance >= 0) ? (fp_distance -
randAct) : (fp_distance + randAct); // decrimenting distance
			}
			else
```

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                  {
                        fp_distance = (fp_distance >= 0) ? (fp_distance +
randAct) : (fp_distance - randAct); // incrimenting distance
                  }

                  printf("You are %d units off course! \n", fp_distance);

                  sleep(1);
            }

            if((fp_distance > (fp_error * -1)) && (fp_distance < fp_error))
            {
                  printf("Success! Autopilot engaged! \n");
            }
            else
            {
                  printf("Failure! you drifted off course! \n");
            }

            printf("Enter 0 to quit, and a different value to play again. \n");
            scanf("%d", &loop);

      }

      return 0;
}
```