Name: Date: Class:

C++ Code for Arduino Setup (Complete)

```
#include <Servo.h>
Servo myservo;
int servopin = 9;
int buttonpin = 2;
int potpin = A0;
int buttonState = 0;
int force = 0;
int angle = 0;
void setup() {
  myservo.attach(servopin);
  pinMode(buttonpin, INPUT_PULLUP);
  pinMode(A1, INPUT);  // Force-sensitive resistor
  pinMode(6, OUTPUT);  // PWM output for mapped force
  Serial.begin(9600);
}
void loop() {
  buttonState = digitalRead(buttonpin);
  if (buttonState == LOW) {
    int potval = analogRead(potpin);
    angle = map(potval, 0, 1023, 20, 120);
    myservo.write(angle);
  } else {
    angle = 20; // Reset angle if button not pressed
    myservo.write(angle);
  }
  force = analogRead(A1);
  analogWrite(6, map(force, 0, 1023, 0, 255));
  // Output angle and force to Serial Monitor
  Serial.print(angle);
  Serial.print(",");
  Serial.println(force);
  delay(1000); // Slight delay for data stability (1000 ms = 1 sec)
}
```