

Washing Machine 12/8/18

```
int standby = 2;
int waterIn = 3;
int waterOut = 4;
int inUse = 5;
int motorFor = 6;
int motorRev = 7;
int button = A0;
int washRep = 5; //no. of wash cycle repeats
int rinseRep = 3; //no. of rinse cycle repeats
int flashRep = 3; //no. of light flashes.

void setup() {
  pinMode(standby,OUTPUT);
  pinMode(waterIn,OUTPUT);
  pinMode(waterOut,OUTPUT);
  pinMode(inUse,OUTPUT);
  pinMode(motorFor,OUTPUT);
  pinMode(motorRev,OUTPUT);
  pinMode(button,INPUT);
}

void washCycle(){
for(int reps = 0;reps < washRep;repst++){
  digitalWrite(motorFor,HIGH);
  delay(500);
  digitalWrite(motorFor,LOW);
  delay(500);
  digitalWrite(motorRev,HIGH);
  delay(500);
  digitalWrite(motorRev,LOW);
  delay(500);
}
}

void rinseCycle(){
for(int reps = 0; reps < rinseRep; reps ++){
  digitalWrite(motorFor,HIGH);
  delay(500);
  digitalWrite(motorFor,LOW);
  delay(500);
  digitalWrite(motorRev,HIGH);
  delay(500);
  digitalWrite(motorRev,LOW);
  delay(500);
}
}

void flashCycle(){
for(int reps = 0; reps < flashRep; reps ++){
  digitalWrite(standby,HIGH);
  delay(400);
  digitalWrite(standby,LOW);
  delay(400);
}
}

void fillCycle(){
  digitalWrite(waterIn,HIGH);
  delay(4000);
  digitalWrite(waterIn,LOW);
}
```

```
void emptyCycle(){
  digitalWrite(waterOut,HIGH);
  delay(4000);
  digitalWrite(waterOut,LOW);
}

void spinCycle(){
  digitalWrite(waterOut,HIGH);
  digitalWrite(motorFor,HIGH);
  delay(6000);
  digitalWrite(motorFor,LOW);
  digitalWrite(waterOut,LOW);
}

void loop(){
  digitalWrite(standby,HIGH);
  digitalWrite(inUse,LOW);
  delay(10);
  while(digitalRead(button) == LOW){
    delay(10);
  }
  digitalWrite(standby,LOW);
  digitalWrite(inUse,HIGH);
  delay(500);
  fillCycle();
  delay(500);
  washCycle();
  delay(500);
  emptyCycle();
  delay(500);
  fillCycle();
  delay(500);
  rinseCycle();
  delay(500);
  emptyCycle();
  spinCycle();
  delay(500);
  flashCycle();
}
```

//The reps (cycle repetitions) counts the repeats of the cycle. It is declared as an "int" inside the brackets of the "for" loop commands. When this is done, the only place it is recognised by the program is in the "for" loop. It will not be recognised by the Arduino anywhere else in the program.