switch...case

[Control Structure]

Description

Like if statements, switch case controls the flow of programs by allowing programmers to specify different code that should be executed in various conditions. In particular, a switch statement compares the value of a variable to the values specified in case statements. When a case statement is found whose value matches that of the variable, the code in that case statement is run.The break keyword exits the switch statement, and is typically used at the end of each case. Without a break statement, the switch statement will continue executing the following expressions ("falling-through") until a break, or the end of the switch statement is reached.

Syntax

```
switch (var) {
  case label1:
    // statements
    break;
  case label2:
    // statements
    break;
  default:
    // statements
    break;
}
```

Parameters

`var`: a variable whose value to compare with various cases. Allowed data types: `int`, `char`.

`label1`, `label2`: constants. Allowed data types: `int`, `char`.

Example Code

```
int red_light_pin= 11;
int green_light_pin = 10;
int blue_light_pin = 9;

void setup() {
  Serial.begin(9600);
  pinMode(red_light_pin, OUTPUT);
  pinMode(green_light_pin, OUTPUT);
  pinMode(blue_light_pin, OUTPUT);
}

void loop(){

 int input = Serial.read();

  switch(input){
    case 1:
      digitalWrite(red_light_pin, HIGH);
      delay(1000);
      digitalWrite(red_light_pin,LOW);
      break;
    case 2:
      digitalWrite(green_light_pin, HIGH);
      delay(1000);
      digitalWrite(green_light_pin,LOW);
      break;
  }
}
```

Assignment

Using same layout as above write code to light up 5 LEDs using the following input type string (a,b,c,d)

(assignment to be submitted by tomorrow 5pm)