Globals

```
#define A 13
#define B 12
#define C 11
#define D 10
#define E 9
#define F 8
#define G 7
#define POINTS_TO_END_THE_GAME 10
```

order a b g e d c g f

```
char order[8] = {A, B, G,
E, D, C, G, F};
```

```
char pins[7] = {A, B, C, D, E, F, G};
const byte INTERRUPT_PIN = 2;
const byte P1_PIN = 5;
const byte P2_PIN = 6;
size_t totGamePoints = 0;
size_t pointsP1 = 0;
size_t pointsP2 = 0;
volatile bool ended = false;
volatile bool forward = true;
volatile size_t curPos = 0;
```

End

Setup

void setup()

size_t i = 0

i <= sizeof(pins) ?

No

```
attachInterrupt(digitalPinToInterrupt(INTERRUPT_PIN), scoring_,
RISING);
Serial.begin(9600);
```

End

Yes

pinMode(pins[i], OUTPUT);

i++

Loop

void loop()

ended ?

Yes

end_();

No

flash current Segment

```
digitalWrite(order[curPos], HIGH);
delay(500 / (totGamePoints + 1));
digitalWrite(order[curPos], LOW);
```

select next segment

```
curPos = forward ? curPos + 1 : (curPos == 0) ? sizeof(order)-1 :
curPos - 1;
curPos = (curPos) % sizeof(order);
```

End

updateScore

void updateStats_(bool statP1, bool statP2)

check if somebody scored

order[curPos] == A && statP1 ?

Yes

```
totGamePoints = totGamePoints + 1;
pointsP1 = pointsP1 + 1;
```

No

order[curPos] == D && statP2 ?

Yes

```
totGamePoints = totGamePoints + 1;
pointsP2 = pointsP2 + 1;
```

statP2 ?

Yes

pointsP2 = (pointsP2 == 0) ? 0 : pointsP2 - 1;

No

statP1 ?

Yes

pointsP1 = (pointsP1 == 0) ? 0 : pointsP1 - 1;

No

penalize player

statP1 ?

Yes

pointsP1 = (pointsP1 == 0) ? 0 : pointsP1 - 1;

No

statP2 ?

Yes

pointsP2 = (pointsP2 == 0) ? 0 : pointsP2 - 1;

No

switch direction

forward = !forward;

End

scoring intyp.

void scoring_()

```
bool statP1 = digitalRead(P1_PIN);
bool statP2 = digitalRead(P2_PIN);
```

ended && statP1 && statP2 ?

Yes

reset the game stats

```
totGamePoints = 0;
pointsP1 = 0;
pointsP2 = 0;
ended = false;
Serial.println("RESET");
```

No

ended ?

Yes

ignore interrupt

No

end the game if max points reached

updateStats_(statP1, statP2);

totGamePoints == POINTS_TO_END_THE_GAME ?

Yes

```
ended = true;
Serial.println("Final Score:");
```

No

printScore_();

End

end()

void end_()

flash all segments

size_t i = 0

i <= sizeof(pins) ?

No

delay(1000);

size_t i = 0

i <= sizeof(pins) ?

No

delay(1000);

End

Yes

digitalWrite(order[i], LOW);

i++

Yes

digitalWrite(order[i], HIGH);

i++

printScore

Prints the current Score of Players

void printScore_()

```
char p1[] = "P1 ";
char p2[] = "/ P2 ";
Serial.print(p1);
Serial.print(pointsP1);
Serial.print(p2);
Serial.println(pointsP2);
```

End