```
#include <Wire.h>
#include <RTC.h>

static DS1307 RTC;
#include "SevSeg.h"
SevSeg sevseg; //Instantiate a seven segment controller object

unsigned long set_times = millis(), timer = millis(), blink_time = millis(),
up_times = millis();
int set_things, up_things, which_one = 0;
String hr, mi, dy, mo, yr;
bool bt = true;
String SDIGIT;
int store=0;
void setup() {
  RTC.begin();

  set_times = millis(), timer = millis(), blink_time = millis(), up_times = millis();
  byte numDigits = 8;
  byte digitPins[] = {11, 10, 9, 8, 12, 13, A0, A1};
  byte segmentPins[] = {1, 2, 5, 6, 3, 4, 7, 0};
  bool resistorsOnSegments = false; // 'false' means resistors are on digit pins
  byte hardwareConfig = COMMON_CATHODE; // See README.md for options
  bool updateWithDelays = false; // Default 'false' is Recommended
  bool leadingZeros = false; // Use 'true' if you'd like to keep the leading zeros
  bool disableDecPoint = true; // Use 'true' if your decimal point doesn't exist or
isn't connected

  sevseg.begin(hardwareConfig, numDigits, digitPins, segmentPins,
resistorsOnSegments,
               updateWithDelays, leadingZeros, disableDecPoint);
 sevseg.setBrightness(90);

  pinMode(set_things, INPUT);
  pinMode(up_things, INPUT);



}

void loop() {

  if (millis() > timer) {
    timer = millis() + 1000;
    getAndDisplay();
  }
```

```
if (digitalRead(set_things) == HIGH && which_one != 0) {
  while (digitalRead(set_things) == HIGH) {

  }
  which_one++;
  if (which_one >= 6) {
    which_one = 0;
  }
}
else if (millis() > up_times + 5000 && which_one != 0) {
  which_one = 0;
}

if (which_one != 0) {
  if (digitalRead(up_things) == HIGH && which_one == 1) {
    while (digitalRead(up_things) == HIGH) {

    }
    up_times = millis();

    RTC.setHours((RTC.getHours() + 1));

  }
  else if (digitalRead(up_things) == HIGH && which_one == 2) {
    while (digitalRead(up_things) == HIGH) {

    }
    up_times = millis();

    RTC.setMinutes((RTC.getMinutes() + 1));

  }
  else if (digitalRead(up_things) == HIGH && which_one == 3) {
    while (digitalRead(up_things) == HIGH) {

    }
    up_times = millis();

    RTC.setDay((RTC.getDay() + 1));

  }
  else if (digitalRead(up_things) == HIGH && which_one == 4) {
    while (digitalRead(up_things) == HIGH) {

    }
    up_times = millis();
```

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    RTC.setMonth((RTC.getMonth() + 1));

   }
   else if (digitalRead(up_things) == HIGH && which_one == 5) {
    while (digitalRead(up_things) == HIGH) {

     }
    up_times = millis();

    RTC.setYear((RTC.getYear() + 1));

   }
 }

 while (digitalRead(set_things) == HIGH) {

   if (store == 0) {
    set_times = millis();
    store = 1;
   }
   if (millis() > set_times + 1500) {
    which_one = 1;
   }
   else {
    which_one = 0;
   }
   if (which_one == 1 && millis() > blink_time + 400 && bt == true) {
    blink_time = millis();
    bt == false;
    SDIGIT = hr + mi + dy + mo;
    sevseg.setNumber(SDIGIT.toInt());

   }
   else if (which_one == 1 && millis() > blink_time + 400 && bt == false) {
    blink_time = millis();
    bt == true;
    SDIGIT = mi + dy + mo;
    sevseg.setNumber(SDIGIT.toInt());
   }
  sevseg.refreshDisplay();
 }
 store=0;

 sevseg.refreshDisplay();
}
```

```
void getAndDisplay() {
  hr = String (RTC.getHours());

  mi = String (RTC.getMinutes());

  dy = String (RTC.getDay());

  mo = String (RTC.getMonth());

  yr = String (RTC.getYear());

  String yyr = yr.substring (2, 3);

  String yyr2 = yr.substring (3, 4);

  yr = yyr + yyr2;

  if (hr == "0") {

    hr = "00";

  }
  else if (hr.toInt() < 10) {

    hr = "0" + hr;

  }

  if (mi == "0") {

    mi = "00";

  }
  else if (mi.toInt() < 10) {

    mi = "0" + mi;

  }

  if (dy == "0") {

    dy = "00";

  }
```

```
 else if (dy.toInt() < 10) {

   dy = "0" + dy;

 }

 if (mo == "0") {

   mo = "00";

 }
 else if (mo.toInt() < 10) {

   mo = "0" + mo;

 }

 if (yr == "0") {

   yr = "00";

 }

 SDIGIT = hr + mi + dy + mo;

sevseg.setNumber(SDIGIT.toInt());
}
```