NAME MSD-2 COURSE ENGR 4020

LESSON Programming (Interfacing) and Buttons DATE

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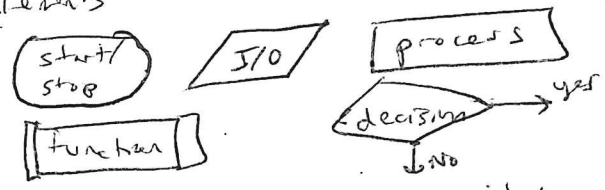
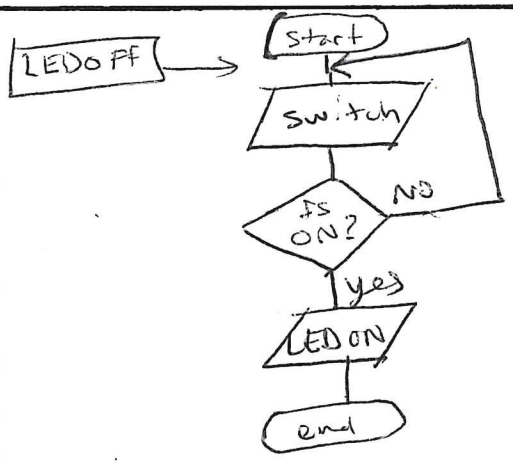
Flow Charts

- Flow charts are used to plan out programs
- Elements



EX: Activate an LED when a switch is flipped



Making Decisions

- Two primary c++ decision statements
  - if/else
  - switch case

```
if (condition==true) {
    process1;
}
else {
    process2;
}
```

operators handout

```
switch(variable) {
    case x:  process1;
    case y:  process2;
}
```

where x, y == variable value

Loops

- c++ loops: while & for
  - we've already used while
  - for loops will run a specified number of times

```
for (int i; i<=5; i++) {
    processes;
}

for (loop variable; condition; increment) {
}
```

Digital Inputs

DigitalIn — create digital input to specific pin

read() — read input (0 or 1) [int]

- shorthand for read()

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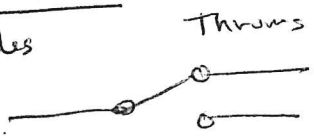
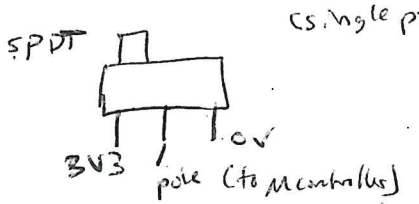
switches

Poles Throws



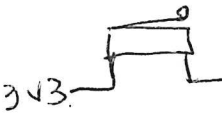
SPDT (single pole double throw)



- can use to implement digital input

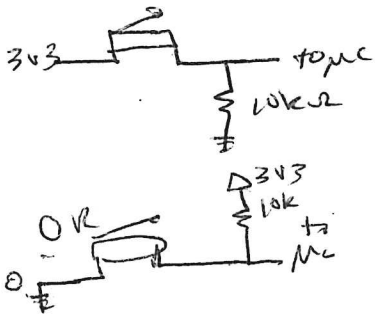
push buttons

- 2 terminals! SPST
- can use to implement digital input as well...



will this work?

NO



2. Instead of MC, try connecting to a scope. capture the rising edge on the scope.

HW make a flow chart for mikes, tonic 1 & prior to writing code

Due next class