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| Program Flow / Control/\* Each Arduino Sketch must contain the following two functions \*/void setup(){  // runs only once.}void loop(){  // runs repeatedly.}delay(*time\_millis*); // pauses program in msdelayMicroseconds(*time\_micros*); //pause s Basic Logic**Simple if()-else**if(*condition*){ //true condition code here}else{ //false statement code here}-----------------**Compound if()-else if()-else**if(*condition1*){ //true condition1 code here}else if(*condition2*){ //true condition2 code here}else{ //false statement code here} | Pin Configuration - INPUT vs OUTPUTpinMode(*pin*, INPUT/OUTPUT/INPUT\_PULLUP);OUTPUT ControldigitalWrite(*pin*, *val*); // val: HIGH or LOWanalogWrite(*pin*, *val*); // val: 0 to 255. tone(*pin*, *freq*); // freq in Hertztone(*pin*, *freq*, *duration*); //duration in msnoTone(*pin*); // stop tone on pinReading INPUTsbuttonPress = digitalRead(*pin*); // any pinsensorVal = analogRead(*pin*); // A0-A5 pinsCommunication**Serial**.begin(*baudrate*); **Serial**.print(“”); // print data out**Serial**.println(“”); // print with new linex = **Serial**.read(); // reads a single byte // datax = **Serial**.parseInt(); // read the next  // available integerLoopingwhile(*condition*){}for(*init*; *condition*; *update variable*){}Comments/Debug/\* this is a multiline comment. nothing between here will be run or executed \*/// this is a single // line comment | Data \ Variable Typesconst (indicates a constant data type)void (null data type)int (integer -32,768 to 32,767)float (floating point / decimal numbers)arrayName[] – list of elements (any type)String (array of characters)System constants / functionsHIGH / LOWOUTPUT / INPUT / INPUT\_PULLUPmillis(); //returns # of millisecondsmicros(); //returns # of microsecondsMath Operators= // assignment+ // addition- // subtraction\* // multiplication/ // division% // modulusLogic Operators== // is equal to?!= // is not equal to?< // less than> // greater than<= // less than or equal>= // greater than or equal&& // compound AND|| // compound OR! // NOT (inverse)Libraries#include <**libraryName**.h>**libraryName** objectName;// read library documentation for usage. |

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