# **Robo Raiders Coding Nomenclature 2019-2020**

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| Identifier Type | Rules for naming | Examples |
| Major Classes (programs that will be downloaded to the robot and run) | * **Class names should be nouns in UpperCamelCase, with the first letter of every word capitalized.** Use whole words — avoid acronyms and abbreviations (unless the abbreviation is much more widely used than the long form, such as URL or HTML).
* **The tele-op program can simply be called “TeleOp”.** If multiple programs are needed for different drive teams, then “TeleOp” can be followed by the driver name. (i.e. TeleOpSteve)
* **Autonomous program names must start with the robot name, then “Auto”, then “Red” or “Blue” (if the field requires mirrored or otherwise different programs for each side), and its purpose (where it’s scoring).** If a delay is added, the number of seconds it waits should be added after the alliance color with an “s” after the number (see example).
* **If a menu program is created, the autonomous program can simply be called “<Robot Name>AutoMenu”.**
 | For an autonomous designed for “Charon” on the blue side of the field with a 10 second delay that will score in the center goal, it would be named: CharonAutoBlueCenter10s |
| Minor Classes(programs that are called by Major Classes but aren’t downloaded to the robot to run) | * **Class names should be nouns in UpperCamelCase, with the first letter of every word capitalized.** Use whole words — avoid acronyms and abbreviations (unless the abbreviation is much more widely used than the long form, such as URL or HTML).
* **Classes should be named such that their purpose is easily identifiable from the name.**
* **The name must be agreed upon by the rest of the programmers in order to clear up confusion.**
 | class CharonAutonomousBaseclass DriveFunction |
| Methods (a.k.a. Functions) | * **Methods should be verbs in lowerCamelCase, or a multi-word name that begins with a verb in lowercase. that is, with the first letter lowercase and the first letters of subsequent words in uppercase.**
* **Methods** **should be named such that their purpose is easily identifiable from the name.**
* **The name must be agreed upon by the rest of the programmers in order to clear up confusion.**
* For parameters, see the variable naming scheme below.
 | init();driveToLine();turn(double degreesToTurn); |
| Variables | * **All variables are written in lowerCamelCase**.
* **Variable names should be short yet meaningful.** The choice of a variable name should be mnemonic— that is, designed to indicate to the casual observer the intent of its use. One-character variable names should be avoided except for temporary "throwaway" variables.
* **The name must be agreed upon by the rest of the programmers in order to clear up confusion.**
 | double robotHeading;int secondsTillEndgame;String vuforiaLiscense; |
| Constants | * **Constants are written entirely in caps, which each word separated by underscores.**
* **Constant names should be short yet meaningful.** The choice of a variable name should be mnemonic— that is, designed to indicate to the casual observer the intent of its use. One-character variable names should be avoided except for temporary "throwaway" variables.
* **The name must be agreed upon by the rest of the programmers in order to clear up confusion.**
 | int ENCODER\_CPR;double[] PID\_CONSTANTS; |
| Motors | * **All motor names are written in lowerCamelCase**.
* **Motor names must start with “motor”, followed by the task of that motor.** If there are multiple motors performing a single task, letters can be written to note the position of each motor: “L” for left and “R” for right. You can also use “F” for front and “B” for back, but they must come after the L/R if it’s present.
* **The task name must be agreed upon by the rest of the programmers in order to clear up confusion.**
 | DcMotor motorLift;DcMotor motorDriveLF; |
| Servos | * **All servo names are written in lowerCamelCase**.
* **Servo names must start with “servo”, followed by the task of that servo.** If there are multiple motors performing a single task, letters can be written to note the position of each motor: “L” for left and “R” for right. You can also use “F” for front and “B” for back, but they must come after the L/R if it’s present.
* **The task name must be agreed upon by the rest of the programmers in order to clear up confusion.**
 | Servo servoGrabberR;CRServo servoIntake;Servo servoLockL; |
| Sensors | * **All sensor names are written in lowerCamelCase**.
* **Sensor names must start with “sensor”, followed by the type of sensor**.If further clarification is needed, the name can be followed by the sensor’s task.The task must start with an intake verb such as “Read” or “Get”.
* **The task name must be agreed upon by the rest of the programmers in order to clear up confusion.**
 | BNO055IMU sensorGyro;ColorSensor sensorColorReadLiftStage;TouchSensor sensorTouchReadyTheCatapult; |
| Timers | * **All timer names are written in lowerCamelCase**.
* **Timer names must start with either “timer” or “delay”, depending on the purpose of the timer.** “delay” is used when we want a small delay in action, typically in TeleOp programs. Otherwise, “timer” is the better option. This is then followed by the specific task of the timer.
* **The task name must be agreed upon by the rest of the programmers in order to clear up confusion.**
 | ElapsedTime timerGetRuntime;ElapsedTime delayAutomateGrabbers; |