//@version=3

//

strategy(title = "Open Close Cross Strategy R5.1 revised by JustUncleL", shorttitle = "OCC Strategy R5.1", overlay = true,

pyramiding = 0, default\_qty\_type = strategy.percent\_of\_equity, default\_qty\_value = 10, calc\_on\_every\_tick=false)

//

// Revision: 5

// Original Author: @JayRogers

// Revision Author: JustUncleL revisions 3, 4, 5

//

// \*\*\* USE AT YOUR OWN RISK \*\*\*

// - There are drawing/painting issues in pinescript when working across resolutions/timeframes that I simply

// cannot fix here.. I will not be putting any further effort into developing this until such a time when

// workarounds become available.

// NOTE: Re-painting has been observed infrequently with default settings and seems OK up to Alternate

// multiplier of 5.

// Non-repainting mode is available by setting "Delay Open/Close MA" to 1 or more, but the reported

// performance will drop dramatically.

//

// R5.1 Changes by JustUncleL

// - Upgraded to Version 3 Pinescript.

// - Added option to select Trade type (Long, Short, Both or None)

// - Added bar colouring work around patch.

// - Small code changes to improve efficiency.

// - NOTE: To enable non-Repainting mode set "Delay Open/Close MA" to 1 or more.

// 9-Aug-2017

// - Correction on SuperSmooth MA calculation.

//

// R5 Changes by JustUncleL

// - Corrected cross over calculations, sometimes gave false signals.

// - Corrected Alternate Time calculation to allow for Daily,Weekly and Monthly charts.

// - Open Public release.

// R4 Changes By JustUncleL

// - Change the way the Alternate resolution in selected, use a Multiplier of the base Time Frame instead,

// this makes it easy to switch between base time frames.

// - Added TMA and SSMA moving average options. But DEMA is still giving the best results.

// - Using "calc\_on\_every\_tick=false" ensures results between backtesting and real time are similar.

// - Added Option to Disable the coloring of the bars.

// - Updated default settings.

//

// R3 Changes by JustUncleL:

// - Returned a simplified version of the open/close channel, it shows strength of current trend.

// - Added Target Profit Option.

// - Added option to reduce the number of historical bars, overcomes the too many trades limit error.

// - Simplified the strategy code.

// - Removed Trailing Stop option, not required and in my opion does not work well in Trading View,

// it also gives false and unrealistic performance results in backtesting.

//

// R2 Changes:

// - Simplified and cleaned up plotting, now just shows a Moving Average derived from the average of open/close.

// - Tried very hard to alleviate painting issues caused by referencing alternate resolution..

//

// Description:

// - Strategy based around Open-Close Crossovers.

// Setup:

// - I have generally found that setting the strategy resolution to 3-4x that of the chart you are viewing

// tends to yield the best results, regardless of which MA option you may choose (if any) BUT can cause

// a lot of false positives - be aware of this

// - Don't aim for perfection. Just aim to get a reasonably snug fit with the O-C band, with good runs of

// green and red.

// - Option to either use basic open and close series data, or pick your poison with a wide array of MA types.

// - Optional trailing stop for damage mitigation if desired (can be toggled on/off)

// - Positions get taken automagically following a crossover - which is why it's better to set the resolution

// of the script greater than that of your chart, so that the trades get taken sooner rather than later.

// - If you make use of the stops, be sure to take your time tweaking the values. Cutting it too fine

// will cost you profits but keep you safer, while letting them loose could lead to more drawdown than you

// can handle.

// - To enable non-Repainting mode set "Delay Open/Close MA" to 1 or more.

//

// === INPUTS ===

useRes = input(defval = true, title = "Use Alternate Resolution?")

intRes = input(defval = 3, title = "Multiplier for Alernate Resolution")

stratRes = ismonthly? tostring(interval\*intRes,"###M") : isweekly? tostring(interval\*intRes,"###W") : isdaily? tostring(interval\*intRes,"###D") : isintraday ? tostring(interval\*intRes,"####") : '60'

basisType = input(defval = "SMMA", title = "MA Type: ", options=["SMA", "EMA", "DEMA", "TEMA", "WMA", "VWMA", "SMMA", "HullMA", "LSMA", "ALMA", "SSMA", "TMA"])

basisLen = input(defval = 8, title = "MA Period", minval = 1)

offsetSigma = input(defval = 6, title = "Offset for LSMA / Sigma for ALMA", minval = 0)

offsetALMA = input(defval = 0.85, title = "Offset for ALMA", minval = 0, step = 0.01)

scolor = input(false, title="Show coloured Bars to indicate Trend?")

delayOffset = input(defval = 0, title = "Delay Open/Close MA (Forces Non-Repainting)", minval = 0, step = 1)

tradeType = input("BOTH", title="What trades should be taken : ", options=["LONG", "SHORT", "BOTH", "NONE"])

// === /INPUTS ===

// Constants colours that include fully non-transparent option.

green100 = #008000FF

lime100 = #00FF00FF

red100 = #FF0000FF

blue100 = #0000FFFF

aqua100 = #00FFFFFF

darkred100 = #8B0000FF

gray100 = #808080FF

// === BASE FUNCTIONS ===

// Returns MA input selection variant, default to SMA if blank or typo.

variant(type, src, len, offSig, offALMA) =>

v1 = sma(src, len) // Simple

v2 = ema(src, len) // Exponential

v3 = 2 \* v2 - ema(v2, len) // Double Exponential

v4 = 3 \* (v2 - ema(v2, len)) + ema(ema(v2, len), len) // Triple Exponential

v5 = wma(src, len) // Weighted

v6 = vwma(src, len) // Volume Weighted

v7 = 0.0

v7 := na(v7[1]) ? sma(src, len) : (v7[1] \* (len - 1) + src) / len // Smoothed

v8 = wma(2 \* wma(src, len / 2) - wma(src, len), round(sqrt(len))) // Hull

v9 = linreg(src, len, offSig) // Least Squares

v10 = alma(src, len, offALMA, offSig) // Arnaud Legoux

v11 = sma(v1,len) // Triangular (extreme smooth)

// SuperSmoother filter

// © 2013 John F. Ehlers

a1 = exp(-1.414\*3.14159 / len)

b1 = 2\*a1\*cos(1.414\*3.14159 / len)

c2 = b1

c3 = (-a1)\*a1

c1 = 1 - c2 - c3

v12 = 0.0

v12 := c1\*(src + nz(src[1])) / 2 + c2\*nz(v12[1]) + c3\*nz(v12[2])

type=="EMA"?v2 : type=="DEMA"?v3 : type=="TEMA"?v4 : type=="WMA"?v5 : type=="VWMA"?v6 : type=="SMMA"?v7 : type=="HullMA"?v8 : type=="LSMA"?v9 : type=="ALMA"?v10 : type=="TMA"?v11: type=="SSMA"?v12: v1

// security wrapper for repeat calls

reso(exp, use, res) => use ? security(tickerid, res, exp, gaps=barmerge.gaps\_off, lookahead=barmerge.lookahead\_on) : exp

// === /BASE FUNCTIONS ===

// === SERIES SETUP ===

closeSeries = variant(basisType, close[delayOffset], basisLen, offsetSigma, offsetALMA)

openSeries = variant(basisType, open[delayOffset], basisLen, offsetSigma, offsetALMA)

// === /SERIES ===

// === PLOTTING ===

// Get Alternate resolution Series if selected.

closeSeriesAlt = reso(closeSeries, useRes, stratRes)

openSeriesAlt = reso(openSeries, useRes, stratRes)

//

trendColour = (closeSeriesAlt > openSeriesAlt) ? green : red

bcolour = (closeSeries > openSeriesAlt) ? lime100 : red100

barcolor(scolor?bcolour:na, title = "Bar Colours")

closeP=plot(closeSeriesAlt, title = "Close Series", color = trendColour, linewidth = 2, style = line, transp = 20)

openP=plot(openSeriesAlt, title = "Open Series", color = trendColour, linewidth = 2, style = line, transp = 20)

fill(closeP,openP,color=trendColour,transp=80)

// === /PLOTTING ===

//

//

// === ALERT conditions

xlong = crossover(closeSeriesAlt, openSeriesAlt)

xshort = crossunder(closeSeriesAlt, openSeriesAlt)

longCond = xlong // alternative: longCond[1]? false : (xlong or xlong[1]) and close>closeSeriesAlt and close>=open

shortCond = xshort // alternative: shortCond[1]? false : (xshort or xshort[1]) and close<closeSeriesAlt and close<=open

// === /ALERT conditions.

// === STRATEGY ===

// stop loss

slPoints = input(defval = 0, title = "Initial Stop Loss Points (zero to disable)", minval = 0)

tpPoints = input(defval = 0, title = "Initial Target Profit Points (zero for disable)", minval = 0)

// Include bar limiting algorithm

ebar = input(defval = 10000, title="Number of Bars for Back Testing", minval=0)

dummy = input(false, title="- SET to ZERO for Daily or Longer Timeframes" )

//

// Calculate how many mars since last bar

tdays = (timenow-time)/60000.0 // number of minutes since last bar

tdays := ismonthly? tdays/1440.0/5.0/4.3/interval : isweekly? tdays/1440.0/5.0/interval : isdaily? tdays/1440.0/interval : tdays/interval // number of bars since last bar

//

//set up exit parameters

TP = tpPoints>0?tpPoints:na

SL = slPoints>0?slPoints:na

// Make sure we are within the bar range, Set up entries and exit conditions

if ((ebar==0 or tdays<=ebar) and tradeType!="NONE")

strategy.entry("long", strategy.long, when=longCond==true and tradeType!="SHORT")

strategy.entry("short", strategy.short, when=shortCond==true and tradeType!="LONG")

strategy.close("long", when = shortCond==true and tradeType=="LONG")

strategy.close("short", when = longCond==true and tradeType=="SHORT")

strategy.exit("XL", from\_entry = "long", profit = TP, loss = SL)

strategy.exit("XS", from\_entry = "short", profit = TP, loss = SL)

// === /STRATEGY ===

// eof