```mql5
//+------------------------------------------------------------------+
//|                                                  BAI14: MACD.mq5 |
//|                           Copyright 2020, MetaQuotes Software Corp. |
//|                                             https://www.mql5.com |
//+------------------------------------------------------------------+
#property copyright "Copyright 2020, MetaQuotes Software Corp."
#property link      "https://www.mql5.com"
#property version   "1.00"
//+-----------Ms ROBOT: robotfx.mt5@gmail.com----------------------+
//| KHAI BAO THU VIEN
#include<Trade\Trade.mqh>
#include <Trade\SymbolInfo.mqh>
#include <Object.mqh>
CTrade trade;

//+------------------------------------------------------------------+
//| Expert initialization function                                   |
//+------------------------------------------------------------------+
int OnInit()
  {
//---

//---
   return(INIT_SUCCEEDED);
  }
//+------------------------------------------------------------------+
//| Expert deinitialization function                                 |
//+------------------------------------------------------------------+
void OnDeinit(const int reason)
  {
//---

  }
//+------------------------------------------------------------------+
//+-----------Ms ROBOT: robotfx.mt5@gmail.com----------------------+
//| Expert tick function
input int                TP=600; //Take Profit(Point)
input int                SL=600; //Stoploss (Point)
input double             Volume=0.05; //Volume
input int                TotalTarget=200; //Target $
input int                CMDTarget=20; //Target $

int      cmd = 0;
int      Reset = 0;

int      SumProfit = 0;
string   Label = "Start";
string   PLabel = "";
string   Signal = "";

float    MACD= 0;
float    MACDmax= 0;
float    MACDmin= 0;

int    B= 0;
int    S= 0;
int    T= 0;

int    W= 0;
int    F= 0;
```

```
double    Bid = 0;
double    Ask = 0;

int       Start = 0;
double    TotalProfit = 0;
double    BalanceOut = 0;
double    BalanceIn = 0;
double    BalanceSave = 0;
//+-----------Ms ROBOT: robotfx.mt5@gmail.com---------------------+
//+--------------------------------------------------------------+
void OnTick()
   {
//---
   if(Start == 0 && MACD == 0)
   {
      BalanceIn=AccountInfoDouble(ACCOUNT_BALANCE);
      BalanceSave=AccountInfoDouble(ACCOUNT_BALANCE);
      Start = 1;
      MACDmax= MACD;
      MACDmin= MACD;
   }
   CheckCMD();

   if(cmd == 0 && Reset == 2)
   {
      BalanceOut=AccountInfoDouble(ACCOUNT_BALANCE);
      TotalProfit = NormalizeDouble(BalanceOut - BalanceIn,2);
      if(BalanceSave > BalanceOut)
      {F++;}
      if(BalanceSave < BalanceOut)
      {W++;}

      MACDmax= MACD;
      MACDmin= MACD;

      Reset = 0;
      BalanceSave = BalanceOut;
      Signal = "";
      Label = "Start";

   }

   if(TotalProfit + SumProfit >= TotalTarget)
      {
         Label = "Stop, Full Target";
         SumProfit = TotalProfit + SumProfit;
         TotalProfit = SumProfit;

         Clean();
         ExpertRemove();
      }

   Check_MACD();
   CheckBuySell();
   Show();
   }
//+-----------Ms ROBOT: robotfx.mt5@gmail.com---------------------+
//+--------------------------------------------------------------+
void CheckCMD()
   {
      //----------------------------------------------------
```

```
        cmd = 0;
        SumProfit = 0;

        if (PositionSelect(_Symbol)==true)
        {

            for(int i=PositionsTotal()-1; i>=0;i--)
            {
                ulong PositionTicket=PositionGetTicket(i);
                string PositionSymbol=PositionGetString(POSITION_SYMBOL);
                double ProfitSymbol = PositionGetDouble(POSITION_PROFIT);
                ENUM_POSITION_TYPE PositionType = (ENUM_POSITION_TYPE)
    PositionGetInteger(POSITION_TYPE);

                if(PositionSymbol==_Symbol)
                {
                    cmd++;
                    SumProfit = SumProfit + ProfitSymbol;
                }
            }
        }

        if(cmd == 2 && SumProfit > 0)
        {
            Clean();
        }

        if(SumProfit > CMDTarget)
        {
            Clean();
        }

    }
//+----------Ms ROBOT: robotfx.mt5@gmail.com--------------------+
//+------------------------------------------------------------+
void Check_MACD()
{
//--- CHECK MACD ---

        double myPriceArray[];
        int MACDDefinition = iMACD(_Symbol,_Period,12,26,9,PRICE_CLOSE);
        ArraySetAsSeries(myPriceArray,true);
        CopyBuffer(MACDDefinition,0,0,5,myPriceArray);

        MACD = myPriceArray[0];
        float M1 = myPriceArray[1];
        float M2 = myPriceArray[2];

        if(MACD > 0 && M1 > M2)
        {
            Signal = "Buy, Up Trend";
        }

        if(MACD < 0 && M1 < M2)
        {
            Signal = "Sell, Down Trend";
        }

        if(MACD > 0 && M1 < M2)
        {
            Signal = "Sell, Turning";
```

```
        }

        if(MACD < 0 && M1 > M2)
        {
            Signal = "Buy, Turning";
        }


    if(MACD > MACDmax)
    {
        MACDmax = MACD;
    }

    if(MACD < MACDmin)
    {
        MACDmin = MACD;
    }

}
//+-----------Ms ROBOT: robotfx.mt5@gmail.com------------------------+
//+------------------------------------------------------------------+
void CheckBuySell()
    {

        Ask = SymbolInfoDouble(Symbol(),SYMBOL_ASK);
        Bid = SymbolInfoDouble(Symbol(),SYMBOL_BID);

        MqlRates PriceInformation[];
        ArraySetAsSeries(PriceInformation,true);
        double Data=CopyRates(Symbol(),Period(),0,Bars(Symbol(),Period()),
PriceInformation);

        if(Bid < PriceInformation[1].low && Bid < PriceInformation[2].low)
        {
            PLabel = "Down";
        }
        if(Ask > PriceInformation[1].high && Ask > PriceInformation[2]
.high)
        {
            PLabel = "Up";
        }

        if(cmd == 0)
        {
            if(Signal == "Buy, Up Trend" || Signal == "Buy, Turning")
                {
                    if(PLabel == "Up")
                    {
                        double BuyTP = NormalizeDouble(Ask + TP*_Point,5);
                        double BuySL = NormalizeDouble(Ask - SL*_Point,5);

                        trade.Buy(Volume,NULL,Ask,BuySL,BuyTP,NULL);
                        Label = "Buy Action";
                        B++;
                    }
                }

            if(Signal == "Sell, Down Trend" || Signal == "Sell, Turning")
                {
                    if(PLabel == "Down")
                    {
```

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                    double SellTP = NormalizeDouble(Bid - TP*_Point,5);
                    double SellSL = NormalizeDouble(Bid + SL*_Point,5);

                    trade.Sell(Volume,NULL,Bid,SellSL,SellTP,NULL);
                    Label = "Sell Action";
                    S++;
               }
          }
       }

       if(cmd == 1)
       {
          if(Label == "Buy Action" && Signal == "Sell, Turning" &&
SumProfit > 0.5*CMDTarget)
          {
              Clean(); T++;
          }

          if(Label == "Sell Action" && Signal == "Buy, Turning" &&
SumProfit > 0.5*CMDTarget)
          {
              Clean(); T++;
          }

       }

    if(cmd > 0)
    {
       Reset = 2;
    }
  }
//+------------------------------------------------------------------+
void Clean()
  {
     trade.PositionClose(Symbol(), 3); // Cấu trúc xóa lệnh
  }
//+------------------------------------------------------------------+
//+-----------Ms ROBOT: robotfx.mt5@gmail.com-----------------------+
void Show()
  {
      string mtext =   (string)MACDmin + " < " +
                       (string)MACD    + " < " +
                       (string)MACDmax + "\n";

      Comment(
             "\n",
             "[TotalProfit] "  , (string)TotalProfit , " / ", (string)
TotalTarget ," ($)\n",
             "Win/ Fail: ", (string)W, " / ", (string)F, "\n",
             "Buy/ Sell/ Turning: ", (string)B, " / ", (string)S, " / ",
 (string)T, "\n",
             "Signal: ", Signal, "\n",
             "MACD: ",mtext,
             "------------------------------------\n",
             Label, " : ", (string)SumProfit," ($)\n"
             );
             Sleep(500); // Dừng 0.5s
  }
//+------------------------------------------------------------------+
// MS ROBOT - robotfx.mt5@gmail.com
```