Following is the code of Vehicle Theft detection system**:**

#include<LiquidCrystal.h>

LiquidCrystal lcd(7, 6, 5, 4, 3, 2);

#include <SoftwareSerial.h>

SoftwareSerial gps(10,11); // RX, TX

//String str="";

char str[70];

String gpsString="";

char \*test="$GPGGA";

String latitude="No Range ";

String longitude="No Range ";

int temp=0,i;

boolean gps\_status=0;

void setup()

{

lcd.begin(16,2);

Serial.begin(9600);

gps.begin(9600);

lcd.print("Vehicle Tracking");

lcd.setCursor(0,1);

lcd.print(" System ");

delay(2000);

gsm\_init();

lcd.clear();

Serial.println("AT+CNMI=2,2,0,0,0");

lcd.print("GPS Initializing");

lcd.setCursor(0,1);

lcd.print(" No GPS Range ");

get\_gps();

delay(2000);

lcd.clear();

lcd.print("GPS Range Found");

lcd.setCursor(0,1);

lcd.print("GPS is Ready");

delay(2000);

lcd.clear();

lcd.print("System Ready");

temp=0;

}

void loop()

{

serialEvent();

if(temp)

{

get\_gps();

tracking();

}

}

void serialEvent()

{

while(Serial.available())

{

if(Serial.find("Track Vehicle"))

{

temp=1;

break;

}

else

temp=0;

}

}

void gpsEvent()

{

gpsString="";

while(1)

{

while (gps.available()>0) //checking serial data from GPS

{

char inChar = (char)gps.read();

gpsString+= inChar; //store data from GPS into gpsString

i++;

if (i < 7)

{

if(gpsString[i-1] != test[i-1]) //checking for $GPGGA sentence

{

i=0;

gpsString="";

}

}

if(inChar=='\r')

{

if(i>65)

{

gps\_status=1;

break;

}

else

{

i=0;

}

}

}

if(gps\_status)

break;

}

}

void gsm\_init()

{

lcd.clear();

lcd.print("Finding Module..");

boolean at\_flag=1;

while(at\_flag)

{

Serial.println("AT");

while(Serial.available()>0)

{

if(Serial.find("OK"))

at\_flag=0;

}

delay(1000);

}

lcd.clear();

lcd.print("Module Connected..");

delay(1000);

lcd.clear();

lcd.print("Disabling ECHO");

boolean echo\_flag=1;

while(echo\_flag)

{

Serial.println("ATE0");

while(Serial.available()>0)

{

if(Serial.find("OK"))

echo\_flag=0;

}

delay(1000);

}

lcd.clear();

lcd.print("Echo OFF");

delay(1000);

lcd.clear();

lcd.print("Finding Network..");

boolean net\_flag=1;

while(net\_flag)

{

Serial.println("AT+CPIN?");

while(Serial.available()>0)

{

if(Serial.find("+CPIN: READY"))

net\_flag=0;

}

delay(1000);

}

lcd.clear();

lcd.print("Network Found..");

delay(1000);

lcd.clear();

}

void get\_gps()

{

gps\_status=0;

int x=0;

while(gps\_status==0)

{

gpsEvent();

int str\_lenth=i;

latitude="";

longitude="";

int comma=0;

while(x<str\_lenth)

{

if(gpsString[x]==',')

comma++;

if(comma==2) //extract latitude from string

latitude+=gpsString[x+1];

else if(comma==4) //extract longitude from string

longitude+=gpsString[x+1];

x++;

}

int l1=latitude.length();

latitude[l1-1]=' ';

l1=longitude.length();

longitude[l1-1]=' ';

lcd.clear();

lcd.print("Lat:");

lcd.print(latitude);

lcd.setCursor(0,1);

lcd.print("Long:");

lcd.print(longitude);

i=0;x=0;

str\_lenth=0;

delay(2000);

}

}

void init\_sms()

{

Serial.println("AT+CMGF=1");

delay(400);

Serial.println("AT+CMGS=\"+91\*\*\*\*\*\*\*\*\*\*\""); // use your 10 digit cell no. here

delay(400);

}

void send\_data(String message)

{

Serial.println(message);

delay(200);

}

void send\_sms()

{

Serial.write(26);

}

void lcd\_status()

{

lcd.clear();

lcd.print("Message Sent");

delay(2000);

lcd.clear();

lcd.print("System Ready");

return;

}

void tracking()

{

init\_sms();

send\_data("Vehicle Tracking Alert:");

send\_data("Your Vehicle Current Location is:");

Serial.print("Latitude:");

send\_data(latitude);

Serial.print("Longitude:");

send\_data(longitude);

send\_data("Please take some action soon..\nThankyou");

send\_sms();

delay(2000);

lcd\_status();

}