EXAMPLE_WALKTHROUGH

The program uses numbers to select options and model your flow conditions. For example, I will model a rectangular channel with The following are steps:

1. Enter "HYDRUALICS_CODE" on the command window of MATLAB.

```
>> HYDRAULICS_CODE
```

2. Enter type of flow.

```
>> HYDRAULICS_CODE
This program was built by GAI JOK[CAID:44717938]
DISCLAIMER: For any quantity that does not displace units, the program is displaying or requiring the quantity in standard unit.
Flow type:
1. GRADUALLY VARYING FLOW.
2. NORMAL FLOW.
3. RAPIDLY VARYING FLOW.
Enter the number corresponding to the type of flow: 2
```

3. Enter the conditions specific to that flow.

```
>> HYDRAULICS_CODE
This program was built by GAI JOK[CAID:44717938]
DISCLAIMER: For any quantity that does not displace units, the program is displaying or requiring the quantity in standard unit.
Flow type:
1. GRADUALLY VARYING FLOW.
2. NORMAL FLOW.
3. RAPIDLY VARYING FLOW.
Enter the number corresponding to the type of flow: 2
WHAT IS THE SHAPE OF THE CHANNEL:
1. RECTANGLE.
2. TRIANGLE.
3. TRAPEZIUM.
4. CIRCLE.
5. COMPOSITE SHAPE.
Enter the number corresponding to the shape of the channel: 1
Enter the discharge:2
Enter manning's number:0.00179
Enter the streamline slope:2/1000
Enter the channel width:1.5
```

4. View of module of the flow.

```
>> HYDRAULICS_CODE
This program was built by GAI JOK[CAID:44717938]
DISCLAIMER: For any quantity that does not displace units, the program is displaying or requiring the quantity in standard unit.
Flow type:
1. GRADUALLY VARYING FLOW.
2. NORMAL FLOW.
3. RAPIDLY VARYING FLOW.
Enter the number corresponding to the type of flow: 2
WHAT IS THE SHAPE OF THE CHANNEL:
1. RECTANGLE.
2. TRIANGLE.
3. TRAPEZIUM.
4. CIRCLE.
5. COMPOSITE SHAPE.
Enter the number corresponding to the shape of the channel: 1
Enter the discharge:2
Enter manning's number:0.00179
Enter the streamline slope:2/1000
Enter the channel width:1.5
The normal depth is 0.188502.
Froude's number is 5.20153.
The critical depth is 0.565895.
The critical slope is 8.04161e-05.
The specific energy is 0.848843.
The normal depth is subcritical.
```

NOTE: With the program able to represent many shapes and different types of flow conditions, the above is just a small insight on the capability of the program—displaying around 1% of the code's potential.