EXPERIMENT 8: Huffman Coding & Decoding Program

Code:

```
clc;
clear all;
close all;
code_length = 0;
x = input("Enter the number of symbols: ");
for m = 1:x
   symbols(m) = input("Enter the symbol number: ");
   p(m) = input("Enter the probability: ");

end
Hx = 0;
for m = 1:x
   [dict,avglen] = huffmandict(symbols,p);
   hcode = huffmanenco(m,dict);
   display(hcode);

   dsig = huffmandeco(hcode,dict);
   display(dsig);

   code_length = length(hcode);
   display(code_length);

end
display(Hx);
```

Efficiency = (Hx/avglen)*100

Input:

Enter the number of symbols: 5

Enter the symbol number: 1

Enter the probability: 0.1

Enter the symbol number: 2

Enter the probability: 0.2

Enter the symbol number: 3

Enter the probability: 0.3

Enter the symbol number: 4

Enter the probability: 0.2

Enter the symbol number: 5

Enter the probability: 0.2

Output:

hcode =

0

0

1

dsig =

1

code_length =

3

hcode =

0

0

0

dsig =

2

code_length =

3

hcode =

0

1

dsig =

3

code_length =

2

hcode =

1

1

dsig =

4

code_length =

2

hcode =

1

0

dsig =

5