Work – How to use Analog and Digital Signal Communication Engineering Software usage

Program 1: Amplitude Modulation

Step 1: Run the program in command line

```
C:\Users\Administrator\Desktop\Analog_and_Digital_Communication>AnalogDigitalCom
munication.exe
Analog and Digital Communication
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*****WARNING*****

Following these comments a copyright logo will display

In order to run Analog and Digital Communication Progams
The copyright logo .png file must be placed in the same directory of this applic
ation

Close the copyright logo in order to proceed further
```

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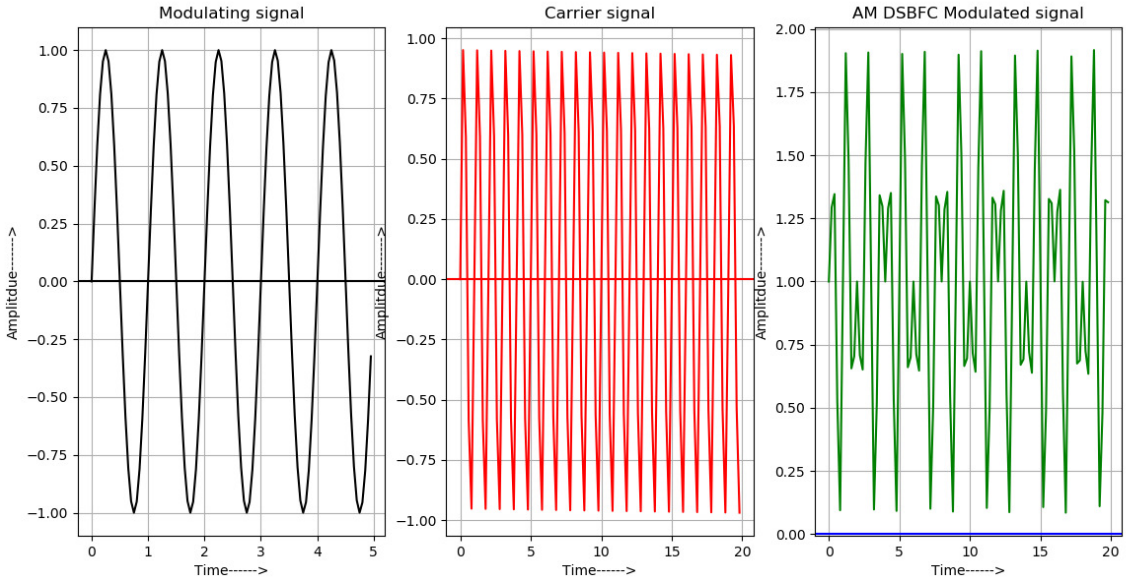
Step2:

```
if i =0 Amplitude Modulation Program will run

if i =1 Frequency Modulation Program will run

if i =2 Phase Modulation Program will run

if i =3 Amplitude Shift Keying Modulation will run

if i =4 Frequency Shift Keying Modulation will run

if i =5 Phase Shift Keying Modulation will run

if i =6 Direct sequence spread spectrum modulation will run

Hint: For proper output use the sample input displayed under each program

Enter the Analog and Digital Communication program you want to run=
0
Amplitude Modulation

Sample input Ec=1,Em=1,fm=2,fc=10,fs=100

carrier amplidue in volts=
1
Modulating signal amplitude in volts=
1
Modulating signal frequency in Hz=
5
Sampling frequency in samples/sec=
100
Carrier signal frequency in Hz=
20
```

Result:



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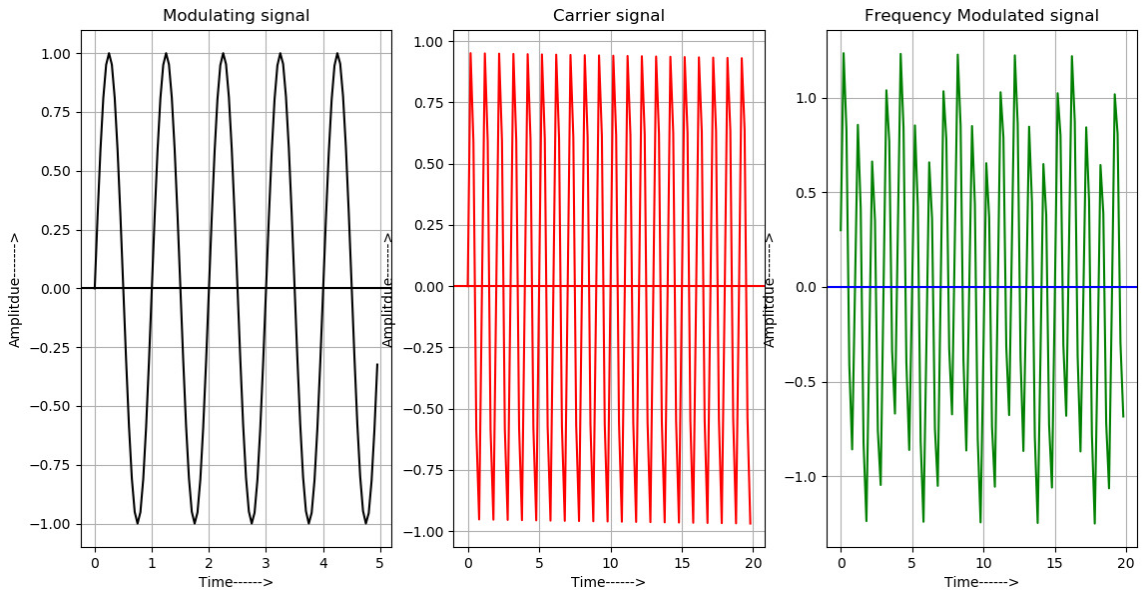
Program 2: Frequency Modulation

```
Enter the Analog and Digital Communication program you want to run=
1
Frequency Modulation

Sample input Ec=1,Em=1,fm=2,fc=10,fs=100

carrier amplidue in volts=
1
Modulating signal amplitude in volts=
1
Modulating signal frequency in Hz=
5
Sampling frequency in samples/sec=
100
Carrier signal frequency in Hz=
20
```

Result:



Program 3: Phase Modulation

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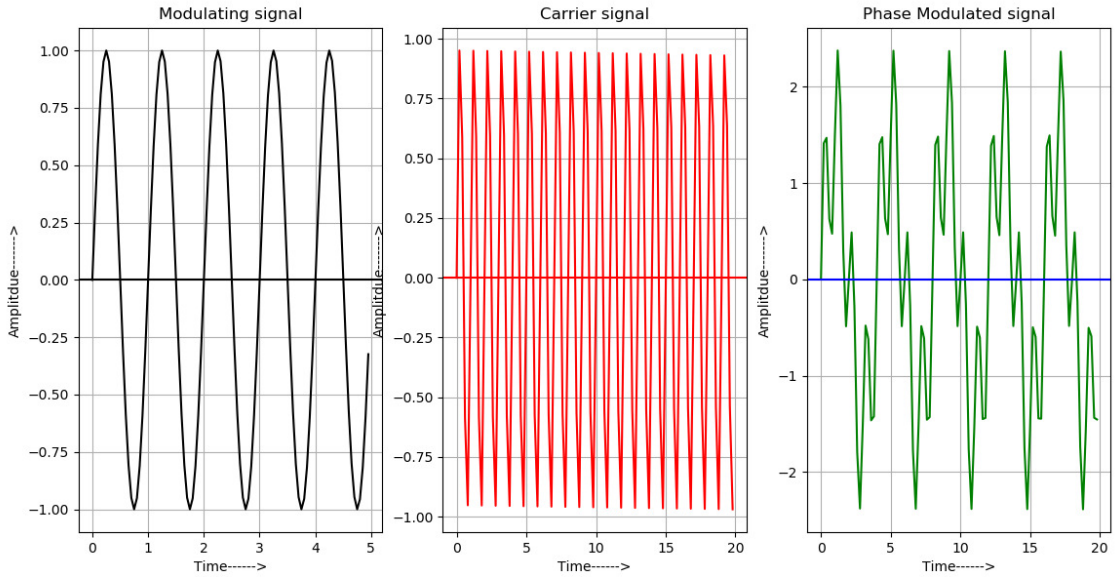
```
Enter the Analog and Digital Communication program you want to run=
2
Phase Modulation

Sample input Ec=1,Em=1,fm=2,fc=10,fs=100

carrier amplidue in volts=
1
Modulating signal amplitude in volts=
1
Modulating signal frequency in Hz=
5
Sampling frequency in samples/sec=
100
Carrier signal frequency in Hz=
20
```

Result



Program 4: Amplitude Shift Key Modulation

```
Enter the Analog and Digital Communication program you want to run=
3
Amplitude Shift Keying

carrier amplidue in volts=
1
Carrier signal frequency in Hz=
2
Sampling frequency in samples/sec=
100
Enter the digital data to be modulated=
[1,0,1,0,1,0,1,0]
```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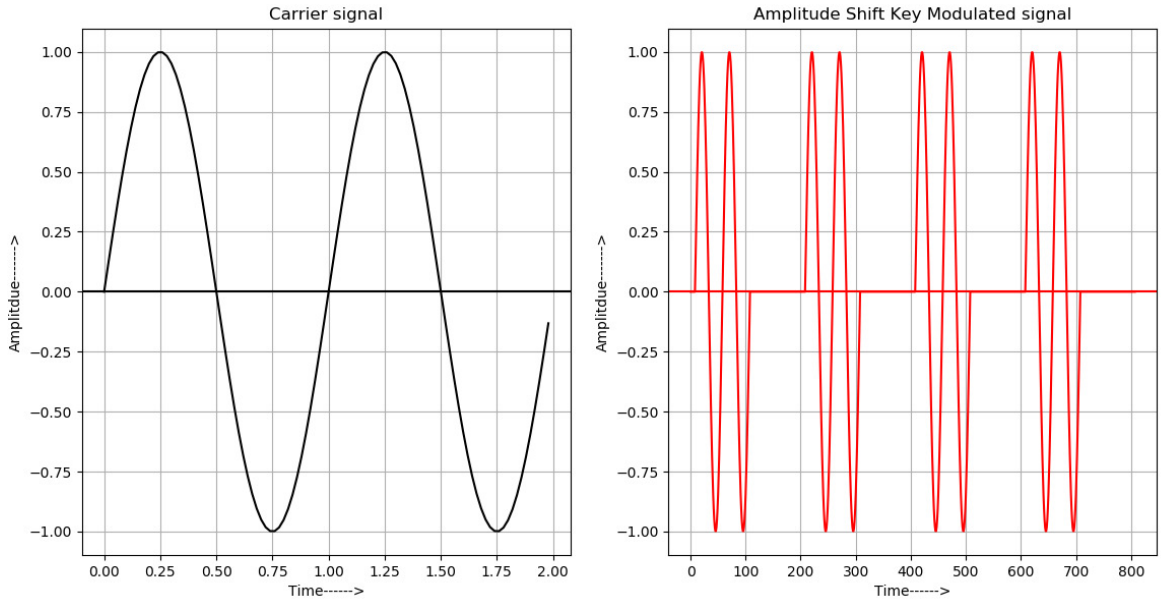
Result



Program 5: Frequency Shift Key Modulation

```
Enter the Analog and Digital Communication program you want to run=
4
Frequency Shift Keying

Sample input Ec=1,fc1=2,fc2=10,fs=100

Carrier signal-1 frequncy in Hz=
2
Carrier signal-2 frequency in HZ=
5
Sampling frequency in samples/sec=
100
Carrier amplitude in volts=
1
Enter the digital data to be modulated=
[1,0,1,0,1,0,1,0]
```

Result

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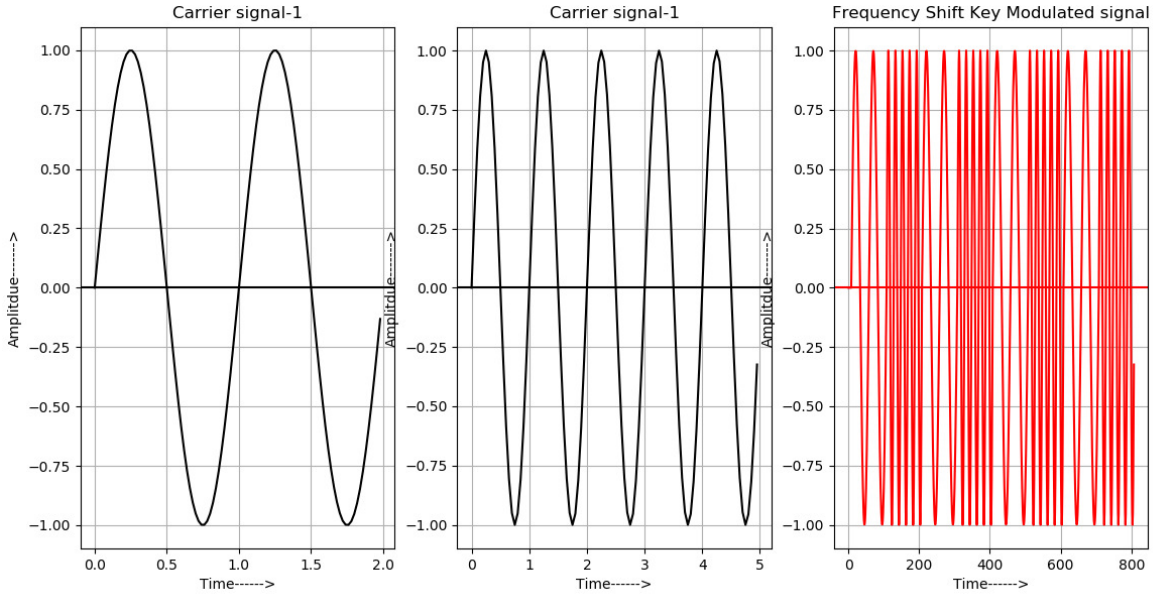
6



Program 6: Phase Shift Key Modulation

```
Enter the Analog and Digital Communication program you want to run=
5
Phase Shift Keying

Carrier signal frequncy in Hz=
1
Sampling frequency in samples/sec=
100
Carrier amplitude in volts=
1
Enter the digital data to be modulated=
[1,0,1,0,1,0,1,0]
```

Result

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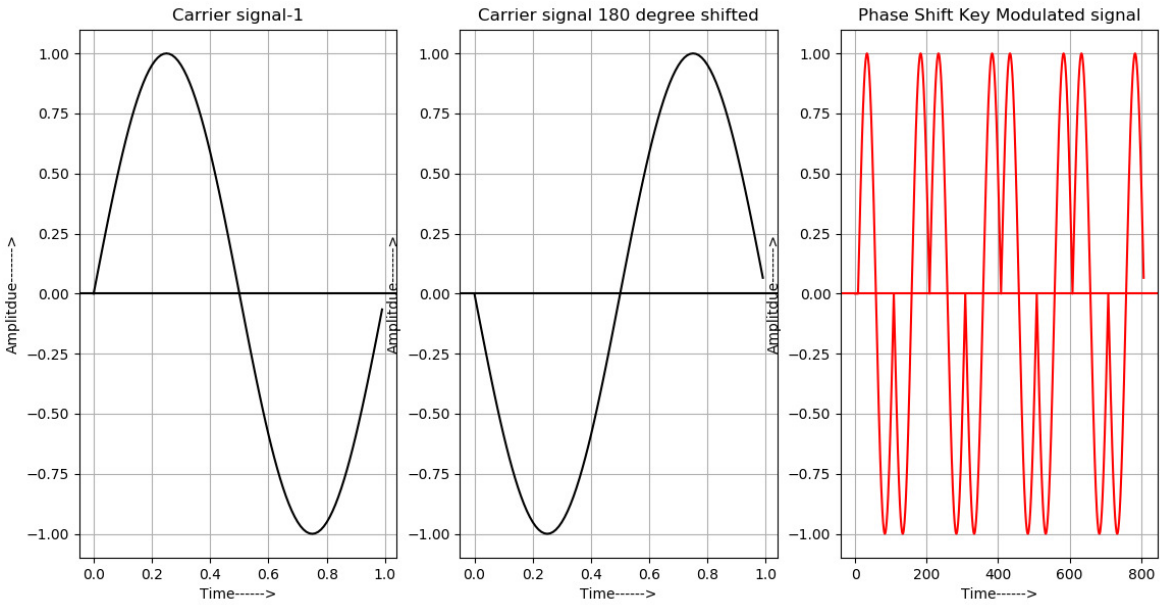

Program 7: Spread Spectrum Modulation Technique

```
Enter the Analog and Digital Communication program you want to run=
6
Spread Sequence Modulation-Direct Sequence (DS/BPSK) technique
```

Result

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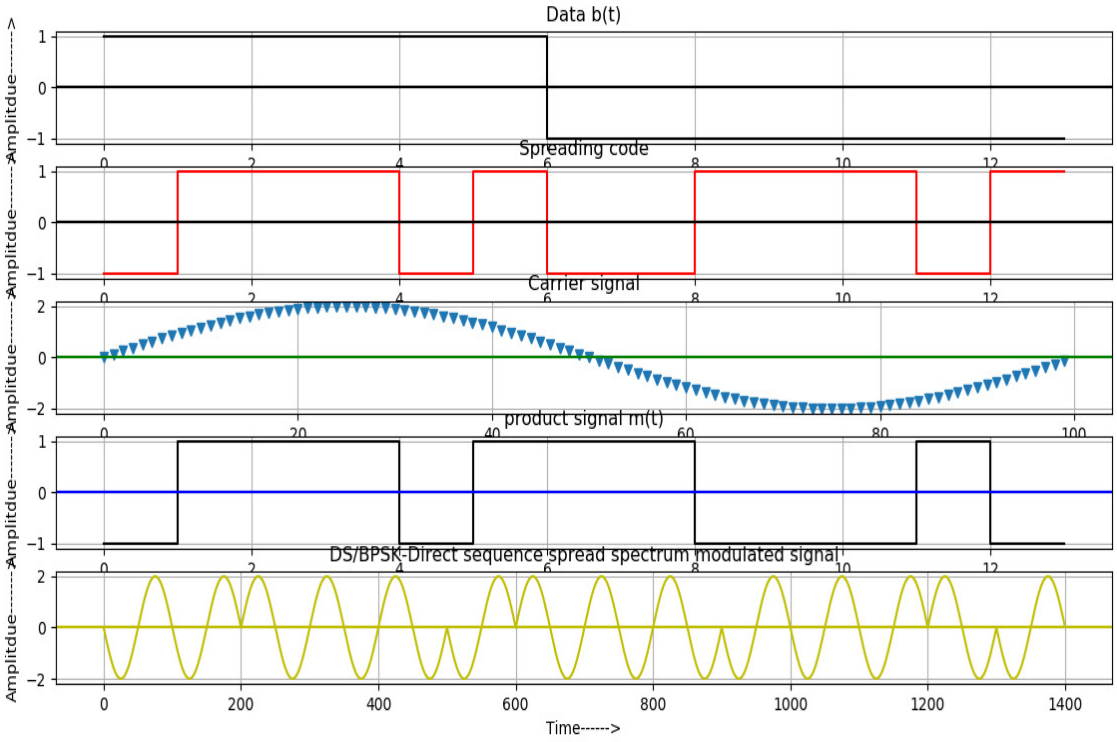

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