

Question 1

Give the dependence graph for the following loop.

```
    for (i=0;i<n;i++){  
S1:    B(i)=A(i)  
S2:    A(i)=A(i)+B(i+1)  
S3:    C(i)=2*B(i)  
    }
```

Give the distance and direction vectors for the loop-carried dependences in the last question.

Source	Sink	Array	Type	Distance Vectors	Direction Vectors

Question 2

Give the dependence graph for the following loop.

```
for (i=0;i<n;i++){
    for (j=1;j<m;j++){
S1:      A(i)=B(i,j)
S2:      B(i,j)= B(i-1,2*j)
    }
}
```

(S1)

(S2)

Give the distance and direction vectors for the loop-carried dependences in the last question.

Source	Sink	Array	Type	Distance Vectors	Direction Vectors

Question 3

Give the dependence graph for the following loop.

```
    for (i=0;i<n;i++)
      for (j=0;j<m;j++){
S1:        B(i-1,j)=C(i,j-2)
S2:        C(i,j)=2*B(i,j+1)
      }
```

Source	Sink	Array	Type	Distance Vectors	Direction Vectors