

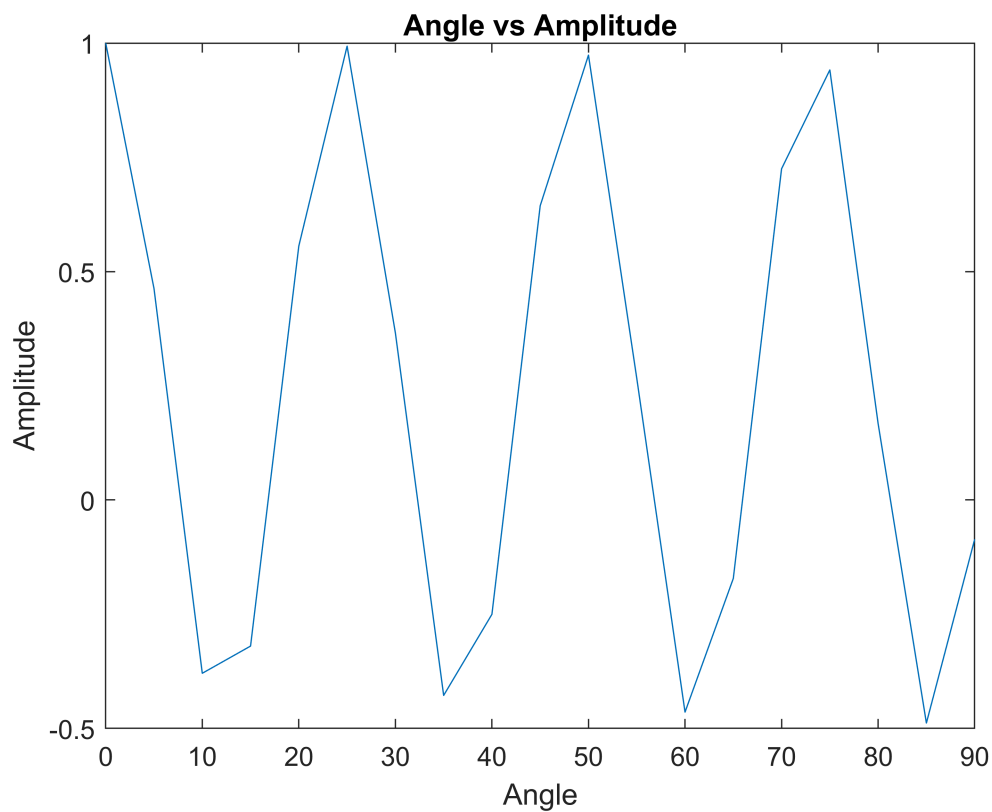
```
x = [0:5:90]
```

```
x = 1×19  
    0     5    10    15    20    25    30    35    40    45    50    55    60 ...
```

```
y = 0.25 + 0.75 * cos(x)
```

```
y = 1×19  
 1.0000    0.4627   -0.3793   -0.3198    0.5561    0.9934    0.3657   -0.4278 ...
```

```
plot(x,y)
```



```
% problem 2  
limit = 0.75;  
values = rand(10,1);  
disp("Limit: " + limit);
```

```
Limit: 0.75
```

```
disp("The generated vector values are: ");
```

```
The generated vector values are:
```

```
disp(values)
```

```
0.9294  
0.7757  
0.4868  
0.4359  
0.4468
```

0.3063  
0.5085  
0.5108  
0.8176  
0.7948

```
tracker = 0;
for i=1:10
    if values(i) > limit
        tracker = tracker + 1;
    end
end
if tracker > 0
    disp("There is at least one value measure above the limit")
else
    disp("All values are below the limit. You can proceed with your data acquisition")
end
```

There is at least one value measure above the limit

```
% problem 3
initialBalance = input("Enter in your initial balance: ");
DoubledBalance = initialBalance * 2;

year = 0;
newBalance = initialBalance;
doubleChecker = 0;
while doubleChecker <= 1
    disp("Year: " + year + " Balance: " + newBalance)
    if doubleChecker == 1
        break
    end
    newBalance = newBalance*1.09;
    if newBalance >= DoubledBalance
        doubleChecker = doubleChecker + 1;
    end
    year = year + 1;
end
```