YILDIZ TECHNICAL UNIVERSITY
ELECTRICAL- ELECTRONICS
FACULTY
COMPUTER ENGINEERING
DEPARTMENT

Algorithm Analysis Lecture
Third Assignment

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1. Recurrence relation: ***P(i,j) = P*P(i-1,j) + (1-p) P (i, j-1)***

```c
#include <stdlib.h>
#include <stdio.h>

double calculateRecursively(double win,int i , int j, int n){
    double arr[n][n];
    double lose = 1 - win;
    if(i==0)
        return 1;
    if(j==0)
        return 0;

    if(i>=0){
        arr[i][j] = win*calculateRecursively(win,i-1, j,n) + lose*calculateRecursively(win,i,j-1,n);
        return arr[i][j];
    }
}

int main(){
    printf("Result: %f", calculateRecursively(0.6,4,4,7));
    return 0;
}
```

```
Result: 0.710208
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Process exited after 0.03036 seconds with return value 0
Press any key to continue . . .
```