**QUIZ 4**

**1. Get the values from the user and store it in 3\*3 matrix. Display the matrix.**

Sample Output:  
1 2 3  
4 5 6  
7 8 9

#include <stdio.h>

int main() {

// Initialize a 3x3 matrix

int matrix[3][3];

printf("Enter values for the 3x3 matrix:\n");

for (int i = 0; i < 3; i++) {

for (int j = 0; j < 3; j++) {

printf("Enter element at position (%d, %d): ", i + 1, j + 1);

scanf("%d", &matrix[i][j]);

}

}

printf("Matrix:\n");

for (int i = 0; i < 3; i++) {

for (int j = 0; j < 3; j++) {

printf("%d ", matrix[i][j]);

}

printf("\n");

}

return 0;

}

OUTPUT:

Enter values for the 3x3 matrix:

Enter element at position (1, 1): 1

Enter element at position (1, 2): 2

Enter element at position (1, 3): 3

Enter element at position (2, 1): 4

Enter element at position (2, 2): 5

Enter element at position (2, 3): 6

Enter element at position (3, 1): 7

Enter element at position (3, 2): 8

Enter element at position (3, 3): 9

Matrix:

1 2 3

4 5 6

7 8 9

**2. Write a program to get the output**

Input: a1b10  
Output: abbbbbbbbb

Input: b3c6d15  
Output: bbbccccccddddddddddddddd

#include <stdio.h>

#include <ctype.h>

int main() {

char input[50];

printf("Enter input: ");

scanf("%s", input);

for (int i = 0; input[i] != '\0'; i++) {

if (isalpha(input[i]))

printf("%c", input[i]);

int j = i + 1;

while (isdigit(input[j])) {

int count = input[j] - '0';

for (int k = 1; k < count; k++) {

printf("%c", input[i]);

}

j++;

}

i = j - 1;

}

}

return 0;

}

OUTPUT:

Enter input: a1b10

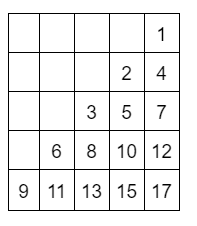
abbbbbbbbbb

Enter input: b3c6d15

Bbbccccccddddddddddddddd

**3. Print the pattern without using arrays.**

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#include <stdio.h>

int main() {

int rows;

printf("Enter the number of rows: ");

scanf("%d", &rows);

for (int i = 1; i <= rows; i++) {

for (int k = 1; k <= rows - i; k++) {

printf(" ");

}

for (int j = i; j >= 1; j--) {

printf("%d ", j);

}

printf("\n");

}

return 0;

}

OUTPUT:

1

2 4

3 5 6

6 8 10 12

9 11 13 15 17