Name:- Jyoti chandrawal
University roll no:- 1088737(27)

Signature:- Jyoti

Ans- 3

```c
# include < stdio.h>
# include < string.h>
void cipher (int i, int c);
int findMin();
void makeArray (int, int);
char arr[20][20], darr[22][22], emessage [111],
ndmessage [111], key [55];
char temp [55], temp2[55];
int k=0;
int main() {
    char message, * dmessage;
    int i, j, klen, emlen, flag=0;
    int r, c, index, min, rows;
    clrscr ();
    printf (" enter the key\n");
    fflush(stdin );
    gets (key);
    printf (" Inenter message to be ciphered\n");
    fflush( stdin);
    gets (message);
    strcpy (temp , key);
    klen = strlen( key);
    k=0;
    for i= 0; i++) {
        if (flag ==1)
```

```c
for ( j=0; key [j] != NULL; j++) {
    if (message [k] == NULL) {
        flag = 1;
        ana[i][j] = '-' ;
    } else {
        ana[i][j] = message [k++];
    }
}

r = i;
c = j;
for ( i=0; i<r; i++) {
    for( j=0; j<c ; j++) {
        printf ("%c", ana[i][j]);
    } printf ("\n");
}
k = 0;
for ( i=0; i<klen; i++) {
    index = findmin ()
    ciphen ( index, r);
}
    emassag[k] = '\0';
Printf ("\n Encrypted message i\n");
for (i= 0; message [i] != NULL; i++)
    Printf ("%c ", emassage [i]);
Printf ("\n \n ");
    emlen = strlen (emassage);
```

```
strcpy (temp, key);
nows = emlen / klen;
nows ;
j = 0;
for (i=0, k=1; emessage [i] != Null; i++, k++) {
    temp2 [j++] = emessage [i];
    if ((k % nows) == 0) {
        temp2 [j] = '\0';
        index = findmin ();
        make-Array (index, now);
        j = 0;
    }
}
Printf (" \n Array Retrieved is \n");
k = 0;
for (i = 0; i < r; i++) {
    for (j = 0; j < c; j++) {
        Printf ("% c", damn [i][j]);
        actmessage [k++] = damn [i][j];
    }
    Printf ("\n");
}
actmessage [k] = '\0';
Printf ("\n message retrieved is \n");
for (i = 0; actmessage [i] != Null; i++)
    Printf ("% c ", actmessage [i]);
```

```c
getch();
    return(0);
    }
        void cipher (int i, int a) {
        int j;
        for ( j=0; j<n; j++)
        {
            cmessage [k++] = ann [j] [i];
        }
        }
        void make_Array (int col, int row)
        {
            int i, j;
            for (i=0; j< row; i++)
            {
            dann [i] [col] = temp2 [i];
        }}
                temp [i    int findmain () {
            int i, j, min, index;
            min = temp [0];
            index = 0;
            for (j=0; temp [j] != NULL; j++) {
                if (temp [j] < min) {
                    min = temp [j].
                    index = j;
                } temp [index] = 123;
            return (index);
```

```
Enetr the key
hello

Enter message to be ciphered
how are you
h o w     a
r e     y o
u -  -  -  -

Encrypted message is
oe-hruw - y-ao-
```

```
Array Retrieved is
n o w   a
r e   y o
u - - - -


Message retrieved is
how are you----
```