Implementation of hill cipher

```
#include<stdio.h>
#include<conio.h>
#include<string.h>
int main()
{
unsigned int a[3][3]={{6,24,1},{13,16,10},{20,17,15}}; // matrix
unsigned int b[3][3]={{8,5,10},{21,8,21},{21,12,8}};   // matrix inverse modulus 26
int i,j, t=0;
unsigned int pt[20],d[20];
char msg[20];
printf("Enter plain text");
scanf("%s",msg); // Plain text ==>msg
for(i=0;i<strlen(msg);i++) // convert character into the numeric eq ie A=0,B=1 .....Z=25
 {
 pt[i]=msg[i]-65;
 printf("%d ",pt[i]);
 }
for(i=0;i<3;i++)  //loop finding encryption of the text
 { t=0;
 for(j=0;j<3;j++)
  {
  t=t+(a[i][j]*pt[j]);                                    [2, 3]   [ 4]          [5]- letter position
  }
 d[i]=t%26;
 }
printf("\nEncrypted Cipher Text :");
for(i=0;i<3;i++) // Printing the cipher text
printf(" %c",d[i]+65);
for(i=0;i<3;i++)
 {
 t=0;
 for(j=0;j<3;j++)
  {
  t=t+(b[i][j]*d[j]);
  }
 pt[i]=t%26;
 }
printf("\nDecrypted Cipher Text :");
for(i=0;i<3;i++)
printf(" %c",pt[i]+65);
```

```
return 0;
}
```