**TUTORIAL 10 SOLUTIONS**

**Question 1**

#include <stdio.h>

int main()

{

FILE \*fptr;

fptr = fopen("fruits.txt", "w");

fprintf(fptr, "%s\n", "Apple");

fprintf(fptr, "%s\n", "Orange");

fprintf(fptr, "%s\n", "Grapes");

fprintf(fptr, "%s\n", "Papaya");

fprintf(fptr, "%s\n", "Banana");

fprintf(fptr, "%s\n", "Kiwi");

fclose(fptr);

return 0;

}

**Question 2**

#include <stdio.h>

int main()

{

FILE \*fptr;

char str1[20];

int count=0;

fptr = fopen("fruits.txt", "r");

fscanf(fptr, "%s", str1);

while(!feof(fptr))

{

printf("%s\n", str1);

count = count + 1;

fscanf(fptr, "%s", str1);

}

printf("\nThe number of fruits listed is %d\n", count);

fclose(fptr);

return 0;

}

**Question 3**

#include <stdio.h>

int main()

{

FILE \*fptr;

char str1[20];

int n;

fptr = fopen("fruits.txt", "a");

for (n = 1; n <= 3; n++)

{

printf("Enter a fruit: ");

scanf("%s", str1);

fprintf(fptr,"%s\n", str1);

}

fclose(fptr);

return 0;

}

**Question 4**

#include <stdio.h>

int main()

{

FILE \*fptr;

int Value,n;

fptr = fopen("MultTable.txt", "w");

printf("Enter the value for the multiplication table: ");

scanf("%d", &Value);

fprintf(fptr,"Multiplcation Table for %d\n\n", Value);

for (n = 1; n <= 12; n++)

{

fprintf(fptr,"%2d x %d = %d\n", n, Value, n\*Value);

}

fclose(fptr);

return 0;

}

**Question 5**

#include <stdio.h>

#include <string.h>

char \* ChooseNumber(int x);

int main()

{

int IN, c0, c1, c2, c3, c4, c5, c6, INdigit[7],n;

char OUT0[5], OUT1[5], OUT2[5], OUT3[5], OUT4[5], OUT5[5], OUT6[5];

FILE \*ptr;

ptr = fopen("TelWord.txt", "w");

printf("Enter a 7-digit phone number: ");

scanf("%d", &IN);

for (n = 0; n <7; n++)

{

INdigit[n] = IN % 10;

IN = IN / 10;

}

strcpy(OUT0, ChooseNumber(INdigit[0]));

strcpy(OUT1, ChooseNumber(INdigit[1]));

strcpy(OUT2, ChooseNumber(INdigit[2]));

strcpy(OUT3, ChooseNumber(INdigit[3]));

strcpy(OUT4, ChooseNumber(INdigit[4]));

strcpy(OUT5, ChooseNumber(INdigit[5]));

strcpy(OUT6, ChooseNumber(INdigit[6]));

for (c6 = 0; c6 < 3; c6++)

{

for (c5 = 0; c5 < 3; c5++)

{

for (c4 = 0; c4 < 3; c4++)

{

for (c3 = 0; c3 < 3; c3++)

{

for (c2 = 0; c2 < 3; c2++)

{

for (c1 = 0; c1 < 3; c1++)

{

for (c0 = 0; c0 < 3; c0++)

{

fprintf(ptr,"%c%c%c%c%c%c%c\n", OUT6[c6], OUT5[c5], OUT4[c4], OUT3[c3], OUT2[c2], OUT1[c1], OUT0[c0]);

}

}

}

}

}

}

}

fclose(ptr);

return 0;

}

char \* ChooseNumber(int x)

{

char n2[] = { 'A','B','C','\0' };

char n3[] = "DEF";

char n4[] = "GHI";

char n5[] = "JKL";

char n6[] = "MNO";

char n7[] = "PRS";

char n8[] = "TUV";

char n9[] = "WXY";

char \*nptr;

if (x == 2)

{

nptr = n2;

}

else if (x == 3)

{

nptr = n3;

}

else if (x == 4)

{

nptr = n4;

}

else if (x == 5)

{

nptr = n5;

}

else if (x == 6)

{

nptr = n6;

}

else if (x == 7)

{

nptr = n7;

}

else if (x == 8)

{

nptr = n8;

}

else if (x == 9)

{

nptr = n9;

}

return nptr;

}

OR

#include <stdio.h>

#include <string.h>

int main()

{

int num,D[7],n,c0,c1,c2,c3,c4,c5,c6;

char OUT[7][4];

FILE \*ptr;

ptr=fopen("Phone.txt","w");

printf("Enter a 7 digit number: ");

scanf("%d",&num);

for(n=0;n<7;n++)

{

D[n]=num%10;

num=num/10;

}

for(n=0;n<7;n++)

{

if (D[n] == 2)

{

strcpy(OUT[n],"ABC");

}

else if (D[n] == 3)

{

strcpy(OUT[n],"DEF");

}

else if (D[n] == 4)

{

strcpy(OUT[n],"GHI");

}

else if (D[n] == 5)

{

strcpy(OUT[n],"JKL");

}

else if (D[n] == 6)

{

strcpy(OUT[n],"MNO");

}

else if (D[n] == 7)

{

strcpy(OUT[n],"PRS");

}

else if (D[n] == 8)

{

strcpy(OUT[n],"TUV");

}

else if (D[n] == 9)

{

strcpy(OUT[n],"WXY");

}

}

for (c6 = 0; c6 < 3; c6++)

{

for (c5 = 0; c5 < 3; c5++)

{

for (c4 = 0; c4 < 3; c4++)

{

for (c3 = 0; c3 < 3; c3++)

{

for (c2 = 0; c2 < 3; c2++)

{

for (c1 = 0; c1 < 3; c1++)

{

for (c0 = 0; c0 < 3; c0++)

{

fprintf(ptr,"%c%c%c%c%c%c%c\n", OUT[6][c6], OUT[5][c5], OUT[4][c4], OUT[3][c3], OUT[2][c2], OUT[1][c1], OUT[0][c0]);

}

}

}

}

}

}

}

fclose(ptr);

return 0;

}