

// 3. A program for generation of Power set of a given set.
// to compile: gcc power.c -lm

```
/*  
name : Durvesh D. Dhake  
section: A  
roll no: A-48  
batch: A-2  
*/  
  
#include<stdio.h>  
#include<math.h>  
void main()  
{  
int i,j,k,flag,temp,num,table[10][10]={0};  
char set[20];  
printf("\n Enter the no. of set element-");  
scanf("%d",&num);  
printf("\n Enter the set elements");  
for(i=0;i<num;i++)  
{  
scanf("%s",set[i]);//&set[i]  
}  
for(i=0;i<pow(2,num);i++)  
{  
temp=i;  
printf("\n");  
for(j=0;j<num;j++)  
{  
table[i][j]=temp%2;  
temp=temp/2;  
printf("%d",table[i][j]);  
}  
}  
printf("\n=====");  
printf("\n Power set is=");  
for(i=0;i<pow(2,num);i++)  
{  
printf("\n{");  
for(j=0;j<num;j++)  
{  
if(table[i][j]==1)  
  
printf("%c",set[j]);  
}  
printf("}\n");  
}  
}  
/*
```

output:
Enter the no. of set element-3
Enter the set elementsa b c
000
100
010
110
001



101
011
111

=====

Power set is=

{}

{a}

{b}

{ab}

{c}

{ac}

{bc}

{abc}

*/

