01)

```c
#include <stdio.h>
int main(){
int x = 4;
printf("The value of variable x is : %d\n", x);
printf("The address in the memory of variable x is : %d\n",
&x);
int *p = &x;
printf("The value pointed by *p is : %d\n", *p);
return 0;
}
```

02)

```c
#include <stdio.h>
int main(){
int x=2, y=3, *p1, *p2;
p1 = &x;
p2 = &y;
printf("Multiplication is : %d\n", *p1 * *p2);
return 0;
}
```

03)

```c
#include <stdio.h>
int main(){
int a=6, b=7, *p1, *p2;
p1 = &a;
p2 = &b;
printf("The largest is : %d\n", *p1 > *p2 ? *p1 : *p2);
return 0;
}
```

04)

```c
#include <stdio.h>
int main(){
int i, j, n, *ptr;
printf("Enter the size of the array : ");
scanf("%d", &n);
int arr[n];
ptr = arr;
th index element to the pointer
printf("Enter the values of the array : \n");
for(i=0; i<n; i++)
 scanf("%d", (ptr+i));
printf("The values are : \n");
for(j=0; j<n; j++)
 printf("arr[%d] = %d\n", j, *(ptr+j));
return 0;
}
```

05)

```c
#include<stdio.h>
int main(){
char str[100], *ptr;
int i=0;
printf("Enter the string : ");
gets(str);
ptr = str;
while(*ptr!='\0'){
 i++;
 ptr++;
}
printf("Length of the string is : %d\n", i);
return 0;
}
```

06)

```c
#include <stdio.h>
int main(){
char str[100], *ptr;
int i, length;
printf("Enter the string: ");
gets(str);
ptr = str;
length = strlen(str);
while(*ptr!='\0'){
 ptr++;
}
ptr--;
printf("The string in reverse order : ");
for(i=length; i>0; i--){
 printf("%c",*ptr--);
}
return 0;
}
```

07)

```c
#include <stdio.h>
void swap(int *a,int *b,int *c);
int main(){
int a, b, c;
printf("Enter a, b, c : \n");
scanf("%d %d %d", &a, &b, &c);
printf("Before swapping : a = %d , b = %d , c = %d\n", a, b, c);
swap(&a, &b, &c);
printf("After swapping : a = %d , b = %d , c = %d\n", a, b, c);
return 0;
}
void swap(int *a,int *b,int *c){
int temp;
temp = *b;
*b = *a;
*a = *c;
*c = temp;
}
```

08)

```c
#include <stdio.h>
int main(){
int i, j, n, sum=0;
int *p;
printf("Enter the size of the array : ");
scanf("%d", &n);
int array[n];
p = array;
printf("Enter the elements of the array : \n");
for(i=0; i<n; i++){
 scanf("%d", p+i);
}
for(j=0; j<n; j++){
 sum = sum + *(p+j);
}
printf("Sum of all the elements of the array = %d\n", sum);
return 0;
}
```

09)

```c
#include <stdio.h>
int main(){
char alphabets[26];
int x;
char *ptr;
ptr = alphabets;
for(x=0; x<26; x++){
 *ptr = x + 'A';
 printf("%c\n", *ptr);
 ptr++;
}
return 0;
}
```

10)

```c
#include <stdio.h>
float area(float height, float width);
int main(){
float h, w, a;
float (*area_p)(float, float);
area_p = &area;
printf("Enter the height : ");
scanf("%f", &h);
printf("Enter the width : ");
scanf("%f", &w);
a = (*area_p)(h, w);
printf("The area of the rectangle is : %.2f", a);
return 0;
}
float area(float height, float width){
 float area = height*width;
return area;
}
```