指 针

指针与字符串

陕西科技大学

字符串

字符串是由一对双引号" "引起来的多个字符构成

字符串存储时在最后要加上字符串的结束符 ' \0 '

字符串是借助数组实现的一种构造数据类型，是字符型数据和数组结合的一种特殊形式

char s1[10]={"hello"};

0	1	2	3	4	5	6	7	8	9
'h'	'e'	'l'	'l'	'o'	'\0'	'\0'	'\0'	'\0'	'\0'

char s2[ ]= "book";

0	1	2	3	4					
'b'	'o'	'o'	'k'	'\0'					

指向字符串的指针

```c
#include "stdio.h"
int main()
{ char  *ps="hello";
  printf("%d %s\n",ps,ps);
  ps="book";
  printf("%d %s\n",ps,ps);
 return 0;
 }
```

运行结果：

```
4210688 hello
4210701 book
```

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SHAANXI UNIVERSITY OF SCIENCE & TECHNOLOGY

字符串指针和字符数组的区别

```
#include"stdio.h"
int main()
{ char *pt="desk";
  printf("\n pt 指向内容%s 地址%d\n",pt,pt);
  pt=pt+2;
  printf("\n pt 指向内容%s 地址%d\n",pt,pt);
  pt="book";
  printf("\n pt 指向内容%s 地址%d\n",pt,pt);
  return 0;
}
```

pt 指向内容desk 地址4210688

pt 指向内容sk 地址4210690

pt 指向内容book 地址4210717

```
#include "stdio.h"
#include "string.h"
int main()
{ char st[20]="hello";
  printf("\n st   内容%s 地址%d\n",st,st);
//   st=st+2;   //错误
//   st="book"; //错误
 strcpy(st,"apple");
 printf("\n st   内容%s 地址%d\n",st,st);
  return 0;
}
```

st   内容hello 地址6487600

st   内容apple 地址6487600

二维数组存储字符串

```c
#include "stdio.h"
int main()
{ char week[8][10]={"","Monday","Tuesday","Wednesday",
"Thursday","Friday","Saturday","Sunday"};
  int i;
  printf("input 1--7 :");
  scanf("%d",&i);
  printf("%s\n",week[i] );
return 0;
}
```

运行结果：

```
input 1--7 :2
Tuesday
```

指向字符串数组的指针

```
#include "stdio.h"
int main()
{ char week[8][10]={"","Monday", "Tuesday", "Wednesday", "Thursday",
"Friday","Saturday","Sunday"};
  int i;
  char (*pw)[10];
  pw=&week[0];
  printf("input 1--7 :");
  scanf("%d",&i);
  printf("%s\n", pw+i );
return 0;
}
```

运行结果：

```
input 1--7 :2
Tuesday
```