

## Array and String Programs:

<p>1. Write a program to add two matrices.</p> <pre>#include&lt;stdio.h&gt; #include&lt;conio.h&gt;  void main() {     int a[3][3],i,j,b[3][3],c[3][3];     clrscr();     printf("\nEnter the Matrix A: ");     for(i=0;i&lt;3;i++)     {         for(j=0;j&lt;3;j++)         {             printf("\na[%d][%d]= ",i,j);             scanf("%d",&amp;a[i][j]);         }     }     printf("\nEnter the Matrix B");     for(i=0;i&lt;3;i++)     {         for(j=0;j&lt;3;j++)         {             printf("\na[%d][%d]= ",i,j);             scanf("%d",&amp;b[i][j]);         }     }     for(i=0;i&lt;3;i++)     {         for(j=0;j&lt;3;j++)         {             c[i][j]=a[i][j]+b[i][j];         }     }     printf("\n Matrix C");     for(i=0;i&lt;3;i++)     {         for(j=0;j&lt;3;j++)         {             printf("\nc[%d][%d]= %d",i,j,c[i][j]);         }     }     getch(); }</pre>	<p>2. Write a Program to multiply two matrices.</p> <pre>#include&lt;stdio.h&gt; #include&lt;conio.h&gt;  void main() {     int a[3][3],i,j,k,b[3][3],c[3][3];     clrscr();     printf("\nEnter the Matrix A: ");     for(i=0;i&lt;3;i++)     {         for(j=0;j&lt;3;j++)         {             printf("\na[%d][%d]= ",i,j);             scanf("%d",&amp;a[i][j]);         }     }     printf("\nEnter the Matrix B");     for(i=0;i&lt;3;i++)     {         for(j=0;j&lt;3;j++)         {             printf("\na[%d][%d]= ",i,j);             scanf("%d",&amp;b[i][j]);         }     }     for(i=0;i&lt;3;i++)     {         for(j=0;j&lt;3;j++)         {             c[i][j]=0;             for(k=0;k&lt;3;k++)             {                 c[i][j]=c[i][j]+a[i][k]*b[k][j];             }         }     }     printf("\n Matrix C");     for(i=0;i&lt;3;i++)     {         for(j=0;j&lt;3;j++)         {             printf("\nc[%d][%d]= %d",i,j,c[i][j]);         }     }     getch(); }</pre>
<p>3. Write a Program to find min and max number among 10 number using array.</p> <pre>#include&lt;stdio.h&gt; #include&lt;conio.h&gt;  void main() {</pre>	<p>4. Write a Program to enter string and display the same.</p> <pre>#include&lt;stdio.h&gt; #include&lt;conio.h&gt;  void main() {     char a[20],b[20];</pre>

<pre> int a[10],max,min,i; clrscr(); printf("Enter value in array A:"); for(i=0;i&lt;10;i++) {     printf("a[%d]=",i);     scanf("%d",&amp;a[i]); } max=a[0]; min=a[0]; for(i=0;i&lt;10;i++) {     if(max&lt;=a[i])     {         max=a[i];     }     if(min&gt;=a[i])     {         min=a[i];     } } printf("\nMin = %d",min); printf("\nMax = %d",max); getch(); }(3<sup>rd</sup> program continue) </pre>	<pre> clrscr(); printf("Enter any string= "); scanf("%s",a);  printf("\n Using Scanf String is %s",a); fflush(stdin);  printf("\n Enter String using gets()"); gets(b); printf("using gets string is %s",b);  getch(); } </pre>
<p>5. Write a Program to find length of a given string. Using built in function and without built in function.</p> <p><b>(Using strlen())</b></p> <pre> #include&lt;stdio.h&gt; #include&lt;conio.h&gt; #include&lt;string.h&gt;  void main() {     char a[20];     int c;     clrscr();     printf("Enter any string= ");     gets(a);     c=strlen(a);     printf("with using strlen() string is %s and length is %d",a,c);     getch(); } </pre> <p><b>(Without Using strlen() )</b></p> <pre> #include&lt;stdio.h&gt; #include&lt;conio.h&gt;  void main() {     char a[20];     int c=0,i;     clrscr();     printf("Enter any string= ");     gets(a); </pre>	<p>6. Write a Program to reverse a given string. Using built in function and without built in function.</p> <p><b>(Using strrev ())</b></p> <pre> #include&lt;stdio.h&gt; #include&lt;conio.h&gt; #include&lt;string.h&gt;  void main() {     char a[20];     clrscr();     printf("Enter a string= ");     gets(a);     printf("\n uisng strrev()");     strrev(a);     printf("\n Using strrev() String is %s",a);     getch(); } </pre> <p><b>(Without Using strrev() )</b></p> <pre> #include&lt;stdio.h&gt; #include&lt;conio.h&gt; #include&lt;string.h&gt;  void main() {     char a[20],b[20];     int i,c=0,j;     clrscr();     printf("Enter a string= ");     gets(a);     for(i=0;a[i]!=NULL;i++)     {         c++; </pre>

<pre> printf("\n without using strlen function"); c=0; for(i=0;a[i]!=NULL;i++) {     c++; } printf("\n string is %s and length is %d", a,c); getch(); }(5<sup>th</sup> program continue) </pre>	<pre> } for(i=0,j=c-1;j&gt;=0;j--,i++) {     b[j]=a[i]; } b[i]=NULL; printf("\n string a is %s  Rev String is %s",a,b); getch(); }(6<sup>th</sup> program continue) </pre>
<p>7. Write a Program to copy given string into other string. Using built in function and without built in function.  <b>(Using strcpy(dest,src)) src string will be copied in dest string</b>  #include&lt;stdio.h&gt;  #include&lt;conio.h&gt;  #include&lt;string.h&gt;</p> <pre> void main() {     char a[20],b[20];     clrscr();     printf("Enter any string= ");     gets(a);     strcpy(b,a);        //strcpy(dest,src)     printf("with using strcpy() string a is %s  and b is %s",a,b);     getch(); } <b>(Withut Using strcpy(dest,src))</b> #include&lt;stdio.h&gt; #include&lt;conio.h&gt;  void main() {     char a[20],b[20];     clrscr();     printf("Enter any string= ");     gets(a);     printf("\n without using strcpy function");     for(i=0;a[i]!=NULL;i++)     {         b[i]=a[i];     }     b[i]='\0';     printf("\n string a is %s and String b is %s", a,b);     getch(); } </pre>	<p>8. Write a Program to concat two string. Using built in function and without built in function.  <b>(Using strcat(s1,s2) string s2 will be added after s1 string)</b>  #include&lt;stdio.h&gt;  #include&lt;conio.h&gt;  #include&lt;string.h&gt;</p> <pre> void main() {     char a[20],b[20];     clrscr();     printf("Enter a string= ");     gets(a);     printf("Enter b string= ");     gets(b);     strcat(a,b);     printf("with using strcat() string a is %s",a);     getch(); } <b>(Withut Using strcat())</b> #include&lt;stdio.h&gt; #include&lt;conio.h&gt; void main() {     char a[20],b[20];     int i, c=0;     clrscr();     printf("Enter a string= ");     gets(a);     printf("Enter b string= ");     gets(b);     for(i=0;a[i]!=NULL;i++)     {         c++;     }     for(i=0,j=c;b[i]!=NULL;i++,j++)     {         a[j]=b[i];     }     a[j]='\0';     printf("\n string a is %s",a);     getch(); } </pre>
<p>9. Write a Program to compare two given string. Using built in function and without built in function.  <b>Using strcmp(s1,s2) if both are same return 0 value else non zero value</b>  #include&lt;stdio.h&gt;</p>	<p>10. Write a Program to compare two given string with ignoring case. Using built in function and without built in function.  <b>Using strcmpi(s1,s2) if both are same return 0 value else non zero value</b></p>

<pre> #include&lt;conio.h&gt; #include&lt;string.h&gt;  void main() {     char a[20],b[20];     clrscr();     printf("Enter a string= ");     gets(a);     printf("Enter b string= ");     gets(b);     printf("\n using strcmp()");     if(strcmp(a,b)==0)     {         printf("Both string are equal");     }     else     {         printf("String are not equal");     }     getch(); }  <b>(Withut Using strcmp())</b>  #include&lt;stdio.h&gt; #include&lt;conio.h&gt; void main() {     char a[20],b[20];     int i, c=0;     clrscr();     printf("Enter a string= ");     gets(a);     printf("Enter b string= ");     gets(b);     i=0;     while(a[i]==b[i])     {         if(a[i]==NULL    b[i]==NULL)             break;          i++;     }     if(a[i]==NULL &amp;&amp; b[i]==NULL)         c=0;     else         c=1;     if(c==0)         printf("\nString are equal: ");     else         printf("\n String are not equal");     getch(); }9<sup>th</sup> program continue </pre>	<pre> #include&lt;stdio.h&gt; #include&lt;conio.h&gt; #include&lt;string.h&gt;  void main() {     char a[20],b[20];     clrscr();     printf("Enter a string= ");     gets(a);     printf("Enter b string= ");     gets(b);     printf("\n using strcmp()");     if(strcmpi(a,b)==0)     {         printf("Both string are equal");     }     else     {         printf("String are not equal");     }     getch(); }  <b>(Withut Using strcmpi())</b>  #include&lt;stdio.h&gt; #include&lt;conio.h&gt; void main() {     char a[20],b[20];     int i, c=0;     clrscr();     printf("Enter a string= ");     gets(a);     printf("Enter b string= ");     gets(b);     i=0;     while(a[i]!=NULL    b[i]!=NULL)     {         If(a[i]&gt;='a' &amp;&amp; a[i]&lt;='z')             a[i]=a[i]-32;         If(b[i]&gt;='a' &amp;&amp; b[i]&lt;='z')             b[i]=b[i]-32;          i++;     }     i=0;     while(a[i]==b[i])     {         if(a[i]==NULL    b[i]==NULL)             break;          i++;     }     if(a[i]==NULL &amp;&amp; b[i]==NULL)         c=0;     else         c=1;     if(c==0)        //10<sup>th</sup> program continue </pre>
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	<pre>                 printf("\nString are equal: ");             else                 printf("\n String are not equal");             getch();         } //10<sup>th</sup> program continue end here </pre>
<p>11. Write a program to check whether given string is palindrome or not.  Ex. RADAR is palindrome.....NAYAN is palindrome.....  ABCD is not palindrome  <b>With the use of inbuilt function</b>  #include&lt;stdio.h&gt;  #include&lt;conio.h&gt;  #include&lt;string.h&gt;</p> <pre> void main() {     char a[100], b[100];     clrscr();     printf("Enter the string to check if it is a palindrome\n");     gets(a);     printf("by using in built function ");     strcpy(b,a);     strrev(b);     if (strcmp(a,b) == 0)         printf("Entered string is a palindrome.\n");     else         printf("Entered string is not a palindrome.\n");     getch(); } </pre>	<p><b>Palindrome program without use of inbuilt function</b>  #include&lt;stdio.h&gt;  #include&lt;conio.h&gt;</p> <pre> void main() {     char a[100], b[100];     int i,j,k=0,c=0;     clrscr();     printf("Enter the string to check if it is a palindrome\n");     gets(a);     printf("\n without using in built function");     for(i=0;a[i]!=NULL;i++)     {         c++;     }     for(i=0,j=c-1;a[i]!=NULL;i++,j--)     {         b[j]=a[i];     }     b[i]=NULL;     i=0;     while(a[i]!=NULL)     {         if(a[i]==b[i])             k=0;         else             k=1;         i++;     }     if(k==0)         printf("String is Palindrome ");     else         printf("String is not Palindrome ");     getch(); } </pre>