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| 1. Write a program which reads n numbers ,calculate the average and deviation of each number about the average .Use 2 function .   //1803117  #include<stdio.h>  void avg(float a[],int n);  void devia(float a[],float avg,int n);  int main()  {  int n,i;  float a[100];  printf("Enter the size of array :\n");  scanf("%d",&n);  printf("Enter the element of array :\n");  for(i=0;i<n;i++)  {  scanf("%f",&a[i]);  }  avg(a,n);  return 0;  }  void avg(float a[],int n)  {  int i;  float sum=0,avg;  for(i=0;i<n;i++)  {  sum=sum+a[i];  }  avg=sum/n;  printf("Average = %.2f\n",avg);  devia(a,avg,n);  }  void devia(float a[],float avg,int n)  {  int i;  float d;  for(i=0;i<n;i++)  {  d=a[i]-avg;  printf("x%d = %.2f deviation= %.2f\n",i+1,a[i],d);  }  } | 2 . Write a program which reads n numbers , calculate the average and deviation of each number about the average .Use 2 function declare all variable globally .  //1803117  #include<stdio.h>  int n,i;  float a[100],sum=0,ava,d;  void avg(float a[],int n);  void devia(float a[],float ava,int n);  int main()  {  printf("Enter the size of array :\n");  scanf("%d",&n);  printf("Enter the element of array :\n");  for(i=0; i<n; i++)  {  scanf("%f",&a[i]);  }  avg(a,n);  return 0;  }  void avg(float a[],int n)  {  for(i=0; i<n; i++)  {  sum=sum+a[i];  }  ava=sum/n;  printf("Average = %.2f\n",ava);  devia(a,ava,n);  }  void devia(float a[],float ava,int n)  {  for(i=0; i<n; i++)  {  d=a[i]-ava;  printf("x%d = %.2f deviation= %.2f\n",i+1,a[i],d);  }  } |

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| 3.Write a program that reads n numbers and rearranged that numbers into a sequence of decreasing values .  //1803117  #include<stdio.h>  void reorder(float a[100],int n);  int main()  {  float a[100];  int n,i;  printf("Enter the size of array :\n");  scanf("%d",&n);  printf("Enter the elements of array :\n");  for(i=0;i<n;i++)  {  scanf("%f",&a[i]);  }  printf("\n");  reorder(a,n);  printf("Descending order :\n ");  for(i=0;i<n;i++)  {  printf("%f\n",a[i]);  }  return 0;  }  void reorder(float a[100],int n)  {  int i,j;  float temp;  for(i=0;i<n;i++)  {  for(j=i+1;j<n;j++)  {  if(a[i]<a[j])  {  temp=a[i];  a[i]=a[j];  a[j]=temp;  }  }  }  } | 5.Write a program that reads a sentence with space and print that sentence with Piglatin Form .  //1803117  #include<stdio.h>  #include<string.h>  int main()  {  int i,j=0,f;  char a[100],b[100],c;  printf("Enter a sentence with space without punctuation mark !!\n");  gets(a);  for(i=0; i<strlen(a); i++)  {  if(i==0 || a[i-1]==' ')  {  c=a[i];  if(c>='A' && c<='Z')  { c='a' + c - 'A'; }  else  c=c;  }  else if(((a[i]>='a' && a[i]<='z')||(a[i]>='A' && a[i]<='Z')) &&(i!=0 && (i-1)!=' '))  {  b[j]=a[i];  if(a[i-2]==' ' ||(i-1)==0)  {  if(b[j]>='a' && b[j]<='z')  b[j]=b[j]-'a'+'A';  }  else  {  if(b[j]>='A' && b[j]<='Z')  b[j]=b[j]-'A'+'a';  }  j++;  } | | | if(a[i]==' ' || i==(strlen(a)-1))  {  b[j]=c;  j++;  b[j]='a';  j++;  b[j]=' ';  j++;  f=1;  }  }  b[j]='\0';  printf("Piglatin form :\n");  puts(b);  return 0;  } | |  | |  |  | 4. |
| 4 .Write a program that reads n numbers and reordering that numbers are following below (any one):  a)Smallest to largest,by magnitude  b) Smallest to largest,by algebraic  c)Largest to smallest,by magnitude  d)Largest to smallest ,by algebraic  //1803117  #include<stdio.h>  void s\_to\_l\_m(int a[],int n);  void s\_to\_l\_a(int a[],int n);  void l\_to\_s\_m(int a[],int n);  void l\_to\_s\_a(int a[],int n);  int main()  {  int a[100],i,n,f;  printf("Enter the size of array:\n");  scanf("%d",&n);  printf("ENTER 1 to ascending by magnitude and 2 by algebric , 3 for descending by magnitude and 4 by algebric :\n ");  scanf("%d",&f);  if(f==1 || f==3)  {printf("Enter the elements of array:\n");  for(i=0;i<n;i++)  {  scanf("%d",&a[i]);  if(a[i]<0)  a[i]=-a[i];  }  if(f==1)  {  s\_to\_l\_m(a,n);  printf("Ascending by magnitude:\n");  for(i=0;i<n;i++)  {  printf("%d\n",a[i]);  }  }  else if(f==3)  {l\_to\_s\_m(a,n);  printf("Descending by magnitude:\n");  for(i=0;i<n;i++)  {  printf("%d\n",a[i]);  }} | }  else if(f==2 || f==4)  {printf("Enter the elements of array:\n");  for(i=0;i<n;i++)  {  scanf("%d",&a[i]);  }  if(f==2)  {  s\_to\_l\_a(a,n);  printf("Ascending by algebric :\n");  for(i=0;i<n;i++)  {  printf("%d\n",a[i]);  }  }  else if(f==4)  {  l\_to\_s\_a(a,n);  printf("Descending by algebric :\n");  for(i=0;i<n;i++)  {  printf("%d\n",a[i]);  }  }  }  return 0;  }  void s\_to\_l\_m(int a[],int n)  {  int i,j,temp;  for(i=0;i<n;i++)  {  for(j=i+1;j<n;j++)  {  if(a[i]>a[j])  {  temp=a[i];  a[i]=a[j];  a[j]=temp; }  }  } } | | void s\_to\_l\_a(int a[],int n)  {  int i,j,temp;  for(i=0;i<n;i++)  {  for(j=i+1;j<n;j++)  {  if(a[i]>a[j])  {  temp=a[i];  a[i]=a[j];  a[j]=temp;  }  }  }  }  void l\_to\_s\_m(int a[],int n)  {  int i,j,temp;  for(i=0;i<n;i++)  {  for(j=i+1;j<n;j++)  {  if(a[i]<a[j])  {  temp=a[i];  a[i]=a[j];  a[j]=temp;  }  }  }  }  void l\_to\_s\_a(int a[],int n)  {  int i,j,temp;  for(i=0;i<n;i++)  {  for(j=i+1;j<n;j++)  {  if(a[i]<a[j])  {  temp=a[i];  a[i]=a[j];  a[j]=temp;  }  }  }  } | | | |
| 6.Write a program that calculate difference of corresponding elements in two tables of integer numbers .  //1803117  #include<stdio.h>  int main()  {  int m,n,i,j;  printf("Enter rows and colmn number of 2 tables :\n");  scanf("%d %d",&m,&n);  int a[m][n],b[m][n],c[m][n];  printf("Enter the elements of 1st table:\n");  for(i=0;i<m;i++)  {  for(j=0;j<n;j++)  {  scanf("%d",&a[i][j]);  }  }  printf("Enter the elements of 2nd table:\n");  for(i=0;i<m;i++)  {  for(j=0;j<n;j++)  {  scanf("%d",&b[i][j]);  }  }  printf("Subtruct table:\n");  for(i=0;i<m;i++)  {  for(j=0;j<n;j++)  {  printf("%4d",c[i][j]=a[i][j]-b[i][j]);  }  printf("\n");  }  return 0;  } | | 7.Write a program to add two table using three dimensional only 1 array .  //1803117  #include<stdio.h>  int main()  {  int i,j,k,a,b;  printf("Enter the rows and colmn number :\n");  scanf("%d %d",&a,&b);  int m[3][a][b];  printf("Enter 1st Table elements :\n");  for(j=0;j<a;j++)  {  for(k=0;k<b;k++)  {  scanf("%d",&m[0][j][k]);  }  }  printf("Enter 2nd Table elements :\n");  for(j=0;j<a;j++)  {  for(k=0;k<b;k++)  {  scanf("%d",&m[1][j][k]);  }  }  printf("Adding Table :\n");  for(i=0;i<a;i++)  {  for(j=0;j<b;j++)  {  m[2][i][j]=m[1][i][j]+m[0][i][j];  printf("%4d",m[2][i][j]);  }  printf("\n");  }  return 0;  } | | |

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| 8.Write a program that reads a line of text and print it backward .  //1803117  #include<stdio.h>  #include<string.h>  int main()  {  char a[1000],b[1000];  int i=0;  printf("Enter a line of text :\n\n\n");  while(1)  {  a[i]=getchar();  if(a[i]=='\n')  {  break;  }  i++;  }  a[i]='\0';  printf("Backward form of this line :\n\n\n");  for(i=0;i<strlen(a);i++)  {  b[i]=a[strlen(a)-i-1];  }  b[i]='\0';  puts(b);  return 0;  }  9.Write a program to process the exam score . Which reads students name with score and print there name with score ,each average and total class average .  //1803117  #include<stdio.h>  #include<string.h>  int main()  {  int a,b,i,j;  printf("Enter the number of total subs and students :\n");  scanf("%d %d",&a,&b);  char s[b][20];  float n[b][a],sum=0,avg[b],t\_avg;  printf("Enter each student name and score :\n");  for(i=0;i<b;i++)  {  scanf("%s",&s[i]);  sum=0;  for(j=0;j<a;j++)  { scanf("%f",&n[i][j]);  sum=sum+n[i][j];  } avg[i]=sum/a; }  sum=0;  11.Extend the problem (10) so that the deviation of each student’s average about the overall class average will be determined .Display the class average , followed by each student’s name ,individual exam score , final score ,and the deviation about the class average .  //1803117  #include<stdio.h>  #include<string.h>  int main()  {  int a,b,i,j;  printf("Enter the number of total students :\n");  scanf("%d",&b);  char s[b][20];  float n[b][7],sum,avg[b],t\_avg,sum2=0;  printf("Enter each student name and score :\n");  printf("Name 1st 2nd 3rd 4th 5th 6th\n");  for(i=0; i<b; i++)  {  sum=0;  n[i][6]=0;  scanf("%s",&s[i]);  for(j=0; j<6; j++)  {  scanf("%f",&n[i][j]);  sum=sum+n[i][j];  if(j<4)  {  n[i][6]=n[i][6]+(n[i][j]\*0.15);  12) Write a program that will generate a table of values for the equation ***y=2***  Where t varies between 0 and 60 .Allow the size of the t-increment to be entered as an input parameter .  //1803117  #include<stdio.h>  #include<math.h>  int main()  {  int t,i;  printf("Enter the value of incrementing :\n");  scanf("%d",&i);  double x,y[60][1];  printf("t y\n");  for(t=0;t<=60;t=t+i)  { x=2\*pow(2.71828,(-0.1\*t))\*sin(0.5\*t);  y[t][1]=x;  printf("%d %lf\n",t,y[t][1]);  }  return 0;  } | 10 . Modify the program (9) written for the previous problem to allow for unequal weightage of the individual exam scores . In particular ,assume that each of the first four exam contributes 15% to the final and last two contributes 20% .  //1803117  #include<stdio.h>  #include<string.h>  int main()  { int a,b,i,j;  printf("Enter the number of total students :\n");  scanf("%d",&b);  char s[b][20];  float n[b][7],sum,avg[b],t\_avg;  printf("Enter each student name and score :\n");  printf("Name 1st 2nd 3rd 4th 5th 6th\n");  for(i=0; i<b; i++){ sum=0; n[i][6]=0;  scanf("%s",&s[i]); for(j=0; j<6; j++){  scanf("%f",&n[i][j]); sum=sum+n[i][j];  if(j<4) { n[i][6]=n[i][6]+(n[i][j]\*0.15); }  else if(j>3) { n[i][6]=n[i][6]+(n[i][j]\*0.20);} }  sum=sum+n[i][6]; avg[i]=sum/7;}  printf("\n\n"); sum=0;  printf("Name 1st 2nd 3rd 4th 5th 6th Final Average\n");  for(i=0; i<b; i++)  {sum=sum+avg[i]; printf("%s ",s[i]);  for(j=0; j<7; j++){ printf(" %.2f",n[i][j]); }  printf(" %.2f",avg[i]); printf("\n"); }  t\_avg=sum/b;  printf("Overall average = %.2f\n",t\_avg);  return 0; }  for(i=0;i<b;i++)  {  sum=sum+avg[i];  }  t\_avg=sum/b;  printf("\n\n");  printf("Students score with name :\n");  for(i=0;i<b;i++)  {printf("%s ",s[i]);  for(j=0;j<a;j++)  {  printf("%.2f ",n[i][j]);  }  printf("\n");  }  printf("\n\n");  for(i=0;i<b;i++)  {  printf("%s's Average num = %.2f\n",s[i],avg[i]);  }  printf("\n\n");  printf("Overall class average = %.2f\n",t\_avg);  return 0;  }    }  else if(j>3)  {  n[i][6]=n[i][6]+(n[i][j]\*0.20);  }  }  sum=sum+n[i][6];  avg[i]=sum/7;  sum2=sum2+avg[i];  }  t\_avg=sum2/b;  printf("\n\n");  printf("Name 1st 2nd 3rd 4th 5th 6th Final Average Deviation\n");  for(i=0; i<b; i++)  {  printf("%s ",s[i]);  for(j=0; j<7; j++)  {  printf(" %.2f",n[i][j]);  }  printf(" %.2f",avg[i]);  printf(" %.2f",t\_avg-avg[i]);  printf("\n");  }  printf("Overall average = %.2f\n",t\_avg);  return 0;  }  13) Write a program that will generate a table of compound interest factor ,F/P ,where ***.***  //1803117  #include<stdio.h>  #include<math.h>  int main()  { int i,j;  float b[16]={4,4.5,5,5.5,6,6.5,7,7.5,8,8.5,9,9.5,10,11,12,15};  float a[30][16];  printf("n");  for(i=0;i<16;i++)  { printf(" i%d",i+1); }  printf("\n");  for(i=0;i<30;i++)  {printf("%d\t",i+1);  for(j=0;j<16;j++)  {  a[i][j]=pow((1+b[j]/100),i+1);  printf("%.3f ",a[i][j]);  }  printf("\n");  }  return 0;  } |  |  |  |

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| 14) Write a program that accept two different currencies and return the value of the second currency per unit of the first currency .Use data that given .design program so that it executes repeatedly , until a stopping condition is selected from menu .  //1803117  #include<stdio.h>  #include<string.h>  #include<conio.h>  int main()  {  int i,d,e,j,k;  char f,ch1[50],ch2[50],c[9][50]={"British pound","Canadian dollar","Dutch guilder","French franc","German mark","Italian lira","Japanese yen","Mexican peso","Swiss franc"};  float v[9]={.65,1.4,1.7,5.3,1.5,1570,98,3.4,1.3};  for(;;)  {  printf("Enter currency for converting :\n");  gets(ch1);  printf("Enter currency to convert :\n");  gets(ch2);  for(i=0;i<9;i++){  if(!strcmp(ch1,c[i]))  {d=i;  break;}  }  if(i==9)  {  printf("Please enter correct currency !");  break;} | for(k=0;k<9;k++)  {  if(!strcmp(ch2,c[k]))  {  e=k;  break;  }  }  if(k==9)  {printf("Please enter correct currency !");  break;}  printf("1 %s = %f %s\n",c[d],v[e]/v[d],c[e]);  printf("Enter q to stop or press another letter : ");  f=getche();  printf("\n");  if(f=='q')  {  break;  }  }  return 0;  } | |
| 15)Write a program that reads a table of integers , A , having m rows and n columns and a list of integers , X , having n elements .multiply this two table which is stored in Y .  //1803117  #include<stdio.h>  int main()  {  int m,n,i,j,k;  printf("Enter the rows and colmns :\n");  scanf("%d %d",&m,&n);  int a[m][n],x[n],y[m];  printf("Enter the element of A :\n");  for(i=0;i<m;i++)  {  for(j=0;j<n;j++)  {  scanf("%d",&a[i][j]);  }  }  printf("Enter the element of X :\n");  for(i=0;i<n;i++)  {  scanf("%d",&x[i]);  }  printf("Showing Y :\n");  for(i=0;i<m;i++)  {y[i]=0;  for(j=0;j<n;j++)  {  y[i]=y[i]+(a[i][j]\*x[j]);  }  printf("%4d",y[i]);  printf("\n");  }  return 0;  } | 16)Write a program that reads A is a table of floating point number having k rows and m columns , and B is a table of floating point having m rows and n columns . Generate a new table C which is the multiplication of that two tables .  //1803117  #include<stdio.h>  int main()  {  int i,j,l;  int k,m,n;  printf("Enter the rows and colmns of A :\n");  scanf("%d %d",&k,&m);  printf("Enter the colmns of B :\n");  scanf("%d",&n);  float a[k][m],b[m][n],c[k][n],sum;  printf("Enter the elements of A :\n");  for(i=0; i<k; i++)  {  for(j=0; j<m; j++)  {  scanf("%f",&a[i][j]);  }  }  printf("Enter the elements of B :\n");  for(i=0; i<m; i++)  {  for(j=0; j<n; j++)  {  scanf("%f",&b[i][j]);  }  }  printf("Showing C :\n");  for(i=0; i<k; i++)  {  for(j=0; j<n; j++)  {  sum=0;  for(l=0; l<m; l++)  {  sum=sum+a[i][l]\*b[l][j];  }  c[i][j]=sum;  printf(" %.2f",c[i][j]);  }  printf("\n");  }  return 0;  } |