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| 9.1) Write a function exchange to interchange the values of two variables ,say x and y .  //1803117  #include<stdio.h>  void exchange(int x,int y);  int x,y;  int main()  {  printf("Enter two integer :\n");  printf("x y\n");  scanf("%d %d",&x,&y);  exchange(x,y);  return 0;  }  void exchange(int x,int y)  {  int t;  t=x;  x=y;  y=t;  printf("x=%d\ny=%d",x,y);  return ;  } | 9.5) Write a program that will generate and print the first n Fibonacci numbers , Using recursion .  //1803117  #include<stdio.h>  int f(int);  int main()  {  int n, i = 0, c;  scanf("%d", &n);  printf("Fibonacci series terms are:\n");  for (c = 1; c <= n; c++)  {  printf("%d ", f(i));  i++;  }  return 0;  }  int f(int n)  {  if (n == 0 || n == 1)  return n;  else  return (f(n-1) + f(n-2));  } | | 9.7 )Write a function prime that returns 1 if its argument is a prime number otherwise zero .  //1803117  #include<stdio.h>  int prime(int n);  int main()  {  int a;  printf("Enter an integer :\n");  scanf("%d",&a);  printf("\n%d\n",prime(a));  return 0;  }  int prime(int n)  {  int i,j;  for(i=2;i<=n/2;i++)  {  if(n%i==0)  {  return 0;  }  }  if(i>n/2)  {  return 1;  }  } | |
| 9.8) write a program that will scan a character string passed as an argument and convert all lowercase characters into their uppercase equivalents.  //1803117  #include<stdio.h>  #include<string.h>  void l\_to\_u(char a[100]);  int main()  {  char a[100];  printf("Enter a string :\n");  gets(a);  l\_to\_u(a);  printf("%s",a);  return 0;  }  void l\_to\_u(char a[100])  {  int i;  9.9 ) Develop a top – down modular program to implement a calculator ,Using Function . The program should request the user to input two numbers and display one of the following as per the desire of the user :  a)Sum of the numbers  b)Difference of the numbers  c)Product of the numbers  d)Division of the numbers  //1803117  #include<stdio.h>  #include<conio.h>  #include<stdlib.h>  void read(void);  void cal(float a,float b);  void dis(float c);  float a,b;  int main()  {  read();  cal(a,b);  return 0;  }  void read(void)  {  printf("Enter two integer:\n");  scanf("%f %f",&a,&b);  return;  }  void cal(float a,float b)  {  char ch;float c;  printf("ENTER '+' TO SUM , '-' TO DIFFERENCE ,'\*' TO PRODUCT AND '/' TO DIVITION....");  ch=getche();  if(ch=='+'){  c=a+b; }  else if(ch=='-') {  c=abs(a-b); }  else if(ch=='\*') {  c=a\*b; }  else if(ch=='/') {  c=a/b; }  printf("\n %.3f%c%.3f = ",a,ch,b);  dis(c); }  void dis(float c)  {  printf("%.3f\n",c);  } | | for(i=0;i<strlen(a);i++)  {  if(a[i]>='a' && a[i]<='z')  {  a[i]='A'+a[i]-'a';  }  }  return;  }  9.10) Develop a modular interactive program using functions that reads the values of three sides of a triangle and display either its area or its perimeter as per the request of the user .  //1803117  #include<stdio.h>  #include<conio.h>  #include<math.h>  void ar\_per(void);  int main()  {  ar\_per();  return 0;  }  void ar\_per(void)  { char ch;  float a,b,c,s,ar,p;  printf("Enter the value of 3 sides of Triangle :\n");  scanf("%f %f %f",&a,&b,&c);  printf("Enter 'a' to calculate Area otherwise 'p'....");  ch=getche();  if(ch=='a')  {  s=(a+b+c)/2;  ar=sqrt((s-a)\*(s-b)\*(s-c));  printf("\n\nAREA of this Triangle = %f\n",ar);  }  else if(ch=='p')  {  p=a+b+c;  printf("\n\nPerimeter of this Triangle = %f\n",p);  }  return;  } | | |
| 9.11 ) Write a function that can be called to find the largest element of a m by n matrix .  //1803117  #include<stdio.h>  int i,j,m,n;  float large(float a[m][n]);  int main()  {  printf("Enter the order of the matrix :\n");  scanf("%d %d",&m,&n);  float a[m][n];  printf("Enter the elements of matrix :\n");  for(i=0; i<m; i++)  {  for(j=0; j<n; j++)  {  scanf("%f",&a[i][j]);  }  }  printf("\nLargest element of this matrix = %f\n",large(a));  return 0;  }  float large(float a[m][n])  {  float c=a[0][0];  for(i=0; i<m; i++)  {  for(j=0; j<n; j++)  {  if(c<a[i][j])  {  c=a[i][j];  }  }  }  return c;  } | 9.12 ) Write a function that called to find the product of two matrix .  //CSE \_\_\_\_\_\_\_\_\_\_\_\_\_\_1803117  #include<stdio.h>  int m,n,o,p,i,j;  void multi(double a[m][n],double b[o][p]);  int main()  {  printf("Enter 1st matrix oreder :\n");  scanf("%d %d",&m,&n);  printf("Enter 2nd matrix oreder :\n");  scanf("%d %d",&o,&p);  double a[m][n],b[o][p];  if(n==o)  {  printf("\nThis 2 matrix are multipliable!!!!!!!\n");  printf("Enter 1st matrix element :\n");  for(i=0; i<m; i++)  {  for(j=0; j<n; j++)  {  scanf("%lf",&a[i][j]);  }  }  printf("Enter 2nd matrix element :\n");  for(i=0; i<o; i++)  {  for(j=0; j<p; j++)  {  scanf("%lf",&b[i][j]);  }  }  printf("\nMultiplication matrix is : \n");  multi(a,b);  }  else if(n!=o)  {  printf("\*\*\*\*\*\*\*\*\*Sorry this 2 matrix are not | | | multipliable !! enter 1st colm and 2nd row equal !!!!\n");  }  return 0;  }  void multi(double a[m][n],double b[o][p])  {  double c[m][n],sum;  int i,j,k;  for(i=0; i<m; i++)  {  for(j=0; j<p; j++)  {  sum=0;  for(k=0; k<n; k++)  {  sum=sum+a[i][k]\*b[k][j];  }  c[i][j]=sum;  printf("%.2lf ",c[i][j]);  }  printf("\n");  }  } |

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| 9.18 ) Write a function that takes an integer parameter m representing the moth number of the year and returns the corresponding name of the month .  //1803117  #include<stdio.h>  void month(char a[12][100],int n);  int main()  {  char a[12][100]={"January","February",  "March","April",  "May","June","July",  "August","September","October",  "November","December"};  int n;  printf("Enter the number of month :\n");  scanf("%d",&n);  month(a,n);  return 0;  }  void month(char a[12][100],int n)  { int i;  for(i=0;i<12;i++)  {  if(n==(i+1))  {  printf("\nName of the month is : %s\n",a[i]);  break;  }  }  } | 9.19 ) Write a function that receives the year as a parameter and returns an appropriate message .  //1803117  #include<stdio.h>  int leap(int y);  int main()  {  int y,l;  printf("Enter a year :\n");  scanf("%d",&y);  l=leap(y);  if(l==1)  {  printf("\nLeap Year\n");  }  else if (l==0)  {  printf("\nNot a Leap Year\n");  }  return 0;  }  int leap(int y)  {  if(y%400==0)  {  return 1;  }  else if(y%100!=0 && y%4==0)  {  return 1;  }  else  {  return 0;  }  } |