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| 1. Write a program that accepts a date from the user in the form *mm/dd/yyyy* and then display it in the form *yyyymmdd*:   1 #include <stdio.h>  2  3 int main(void)  4 {  5 int year, month, day;  6  7 printf("Enter a date (mm/dd/yyyy): ");  8 scanf("%d/%d/%d",&month, &day, &year);  9  10 printf("You entered the date %d%.2d%.2d \n", year, month, day);  11  12 return 0;  13 } |
| 1. Write a program that formats product information entered by the user.   1 #include <stdio.h>  2  3 int main(void)  4 {  5 int item;  6 float price;  7 int year, month, day;  8  9 printf("Enter item number: ");  10 scanf("%d", &item);  11  12 printf("Enter unit price: ");  13 scanf("%f", &price);  14  15 printf("Enter purchase date (mm/dd/yyyy): ");  16 scanf("%d/%d/%d", &month, &day, &year);  17  18 printf("Item Unit Purchase \n");  19 printf( " Price Date \n");  20 printf("%-16d$%7.2f%10.2d/%.2d/%.4d \n",  21 item, price, month,day,year );  22  23 return 0;  24 } |
| 1. Write a program that breaks down an ISBN entered by the user:   1 #include <stdio.h>  2  3 int main(void)  4 {  5 int gs1, group, publisher, item, check;  6  7 printf("Enter ISBN: ");  8 scanf("%d-%d-%d-%d-%d", &gs1, &group, &publisher, &item, &check);  9  10 printf("GS1 prefix: %d \n", gs1);  11 printf("Group identifier: %d \n", group);  12 printf("Publisher code: %d \n", publisher);  13 printf("Item number: %d \n", item);  14 printf("Check digit: %d \n", check);  15  16 return 0;  17 } |
| 1. Write a Program that prompts the user to enter a telephone number in the form (xxx) xxx-xxxx and then displays the number in the form xxx.xxx.xxxx:   1 #include <stdio.h>  2  3 int main(void)  4 {  5 int first, middle, last;  6  7 printf("Enter phone number [(xxx) xxx-xxxx]: ");  8 scanf("(%d) %d-%d", &first, &middle, &last);  9  10 printf("You entered %.3d.%.3d.%.4d \n", first, middle, last);  11  12 return 0;  13 } |
| 1. Write a program that asks the user to enter the numbers from 1 to 16 (in any order) and then displays the numbers in a 4 by 4 arrangement, followed by the sums of the rows, columns, and diagonals:   1 #include <stdio.h>  2  3 int main(void)  4 {  5 int m11, m12, m13, m14,  6 m21, m22, m23, m24,  7 m31, m32, m33, m34,  8 m41, m42, m43, m44;  9  10 int row\_sum\_1, row\_sum\_2, row\_sum\_3, row\_sum\_4;  11 int col\_sum\_1, col\_sum\_2, col\_sum\_3, col\_sum\_4;  12 int diag\_left, diag\_right;  13  14 scanf("%d %d %d %d", &m11, &m12, &m13, &m14);  15 scanf("%d %d %d %d", &m21, &m22, &m23, &m24);  16 scanf("%d %d %d %d", &m31, &m32, &m33, &m34);  17 scanf("%d %d %d %d", &m41, &m42, &m43, &m44);  18  19 row\_sum\_1 = m11 + m12 + m13 + m14;  20 row\_sum\_2 = m21 + m22 + m23 + m24;  21 row\_sum\_3 = m31 + m32 + m33 + m34;  22 row\_sum\_4 = m41 + m42 + m43 + m44;  23  24 col\_sum\_1 = m11 + m21 + m31 + m41;  25 col\_sum\_2 = m12 + m22 + m32 + m42;  26 col\_sum\_3 = m13 + m23 + m33 + m43;  27 col\_sum\_4 = m14 + m24 + m34 + m44;  28  29 diag\_left = m11 + m22 + m33 + m44;  30 diag\_right = m14 + m23 + m32 + m41;  31  32 printf("Row sums: %d %d %d %d \n",  33 row\_sum\_1, row\_sum\_2, row\_sum\_3, row\_sum\_4);  34  35 printf("Column sums: %d %d %d %d \n",  36 col\_sum\_1, col\_sum\_2, col\_sum\_3, col\_sum\_4);  37  38 printf("Diagonal sums: %d %d \n", diag\_left, diag\_right);  39  40 return 0;  41 } |
| 1. Modify the addfrac.c program of Section 3.2 so that the user enters both fractions at the same time, separated by a plus sign:   1 #include <stdio.h>  2  3 int main(void)  4 {  5 int num1, denom1;  6 int num2, denom2;  7 int result\_num, result\_denom;  8  9 printf("Enter two fractions separated by a plus sign: ");  10 scanf("%d /%d +%d /%d", &num1, &denom1, &num2, &denom2);  11  12 result\_num = num1 \* denom2 + num2 \* denom1;  13 result\_denom = denom1 \* denom2;  14  15 printf("The sum is %d / %d \n", result\_num, result\_denom);  16  17 return 0;  18 } |