1. S3-1.c

#include <stdio.h>

main(){

char ch, c1, c2;

printf("Enter a character: ");

ch = getchar();

if ((ch >= 'a') || (ch <= 'z')) ch -= 32;

c1 = ch - 1;

c2 = ch + 1;

if (ch == 'A') c1 = ch + 25;

if (ch == 'Z') c2 = ch - 25;

putchar(c1);

putchar(ch);

putchar(c2);

putchar('\n');

}

1. S3-2.c

#include <stdio.h>

main() {

int a, b, c, max;

printf("Please input three integers: \n");

scanf("%d%d%d", &a, &b, &c);

max = a;

if (c > b) max = c > a ? c : a;

else max = b > a ? b : a;

printf("The max number is %d", max);

}

1. S3-3.c

#include <stdio.h>

main() {

int i, sum = 0;

i = 1;

while (i <= 100) sum += i++;

printf("The sum from 1 to 100 is %d\n", sum);

}

1. S3-4.c

#include <stdio.h>

main() {

char x = 'z';

while (x >= 'a') printf("%3c", x--);

}

1. S3-5.c

#include <stdio.h>

main() {

int a, b, d;

char ch;

printf("Please input a expression:");

scanf("%d%c%d", &a, &ch, &b);

switch (ch) {

case '+':

d = a + b;

printf("%d+%d=%d\n", a, b, d);

break;

case '-':

d = a - b;

printf("%d-%d=%d\n", a, b, d);

break;

case '\*':

d = a \* b;

printf("%d\*%d=%d\n", a, b, d);

break;

case '/':

if(b == 0)

printf("Divisor is zero\n");

else

printf("%d/%d=%f\n", a, b, (float)a / b);

break;

default:

printf("Input Operator error!\n");

}

}

1. S3-6.c

#include <stdio.h>

main() {

float a, b;

int i, f = 0;

printf("请主持人输入时尚手机的实际价格\n");

scanf("%f", &b);

system("cls");

for (i = 1; i <= 3; i++) {

printf("\n\n请观众猜时尚手机的价格\n");

scanf("%f", &a);

if(a < b) printf("低了\n");

if(a == b) {

printf("猜对了!\n");

f = 1;

break;

}

if(a > b) printf("高了\n");

}

if(f != 1)printf("你输了，加油！\n");

system("pause");

}

1. S3-7.c

#include <stdio.h>

main() {

int i, j, tab = 25;

int map[5][10];

for (i = 0; i < 10; i++){

for (j = i; j < 10; j++){

if (i == 0) map[i][j] = 1;

if (i == j) map[i > 4 ? 9 - i : i][j] = 1;

}

}

for (i = 0; i < 5; i++){

for (tab; tab > 0; tab--) putchar(' ');

tab = 25;

for (j = 0; j < 10; j++){

if (map[i][j] == 1) putchar('\*');

else putchar(' ');

}

putchar('\n');

}

}

1. S3-8.c

#include <stdio.h>

main() {

int i = 10 ,a, dig = 0;

printf("Input a number: ");

scanf("%d", &a);

do {

printf("%d", a % i);

a /= i;

dig++;

} while(a);

printf("\n%d digits", dig);

}

1. S3-9.c

#include <stdio.h>

#include <math.h>

long factorial(int n){

long sum = 1;

for (n; n > 1; n--)

sum \*= n;

return sum;

}

e(int x) {

int i = 1;

long a, b;

double sum = 1, temp;

do {

a = factorial(i);

b = pow(x, i);

temp = (double) b / a;

sum += temp;

i++;

} while(temp >= 10e-6);

printf("%.6lf", sum);

}

main() {

e(1);

}

1. S3-10.c

#include <stdio.h>

int input\_number(){

int n, dig = 0, result;

printf("Input number: ");

scanf("%d", &n);

result = n;

do {

n /= 10;

dig++;

} while(n);

if (dig != 6) return input\_number();

else return result;

}

main() {

int n, a, b;

n = input\_number();

a = n / 1000;

b = n % 1000;

printf("%d, 拆分成:%d %d\n", n,a,b);

printf("sum=%d, sub=%d, multi=%d\n", a+b,a-b,a\*b);

if (b == 0) printf("The second operator is zero!");

else printf("dev=%.2lf, mod=%d", (double)a/b, a%b);

}