RESULTS

Exercise 1-1:

[a]: pData = &data01;

Exercise 1-2:

1.

[a]: 16710600 [b]: 16710580

[c]: 5

2.

[a]: 2162174 [b]: 2162169

[c]: 5

Explain: in (1.) because LONG has 4 bytes, so the result is (p1-p2)/4 = 5. Like (1.), (2.) use CHAR has 1 byte, so the result is p1-p2 = 5

Exercise 1-3:

[Result]: 35

Exercise 1-4:

[a]: &a, &b

[magic01]:

int magic01 ( int \*a, int \*b )

{

int temp;

temp = \*a;

\*a = \*a + \*b;

\*b = temp - \*b;

}

Exercise 2-1:

[a]: char c

[b]: \*(data + i)

[c]: \*(data + i)

[d]: data01

Exercise 2-2

int my\_strlen ( char \*data )

{

int i = 0;

while ( \*(data + i) != '\0' )

{

i++;

}

return (i);

}

Exercise 2-3

char\* my\_strstr ( char\* s1, char\* s2 )

{

int iS1 = 0;

int iS2 = 0;

int t = 0;

for ( iS1 = 0; \*(s1 + iS1) != '\0'; iS1++ ) {

if ( (\*(s1 + iS1) == \*(s2 + iS2)) ) {

t = 1;

iS2++;

if ( \*(s2 + iS2) == '\0' ) {

return (s1 + iS1 + 1 - iS2);

}

}

else if ( t == 1 ) {

t = 0;

iS2 = 0;

}

}

return NULL;

}

Exercise 3-1

[a]: struct fig \*val

[b]: \*pFunc[val ->kind]

[c]: val->width

[d]: val->height

[e]: &f1

Exercise 3-2

int oval ( int height, int width )

{

return (height / 2 \* width / 2 \* 3);

}

Exercise 3-3

int circle ( int , int );

int square( int, int );

int rectangle ( int, int );

int ( \*pFunc[3] ) (int, int) = {circle, square, rectangle};

struct fig {

int kind;

int s1;

int s2;

};

int getAreaSize2 ( struct fig \*val )

{

int s;

s = (\*pFunc[val->kind])(val->s1, val->s2);

return s;

}

int circle ( int height, int nouse )

{

return (height \* 3.14);

}

int square ( int height, int nouse )

{

return (height \* 4);

}

int rectangle ( int height, int width )

{

return ((height + width)\*2);

}

void main ( )

{

struct fig f1;

int k, h, w;

printf ( "Input figure kind:" );

scanf\_s ( "%d", &k );

printf ( "Input height width:" );

scanf\_s ( "%d %d", &h, &w );

f1.kind = k;

f1.s1 = h;

f1.s2 = w;

printf ( "%d\n", getAreaSize2 ( &f1 ) );

getchar ( );

}

Exercise 4:

Exercise 5:

[a]: PORT\_LED = 0x55

[b]: PORT\_LED = 0xC3

Exercise 6:

struct exam

{

char name[32];

int science;

int english;

int math;

};

void avg ( struct exam \*pEx )

{

int avg;

printf ( "Name : %s", pEx->name );

printf ( "Scores: %d %d %d", pEx->english , pEx->math , pEx->science );

avg = (pEx->english + pEx->math + pEx->science) / 3;

printf ( "Average: %d", avg );

}

void main ( void )

{

struct exam ex1;

int e, m, s;

char n[32]= "";

printf ( "Input your name:" );

scanf\_s ( "%s", n );

printf ( "Input English, Math, Science scores:" );

scanf\_s ( "%d %d %d", &e, &m, &s );

strcpy\_s ( ex1.name, strlen ( n ) + 1, n );

ex1.science = s;

ex1.english = e;

ex1.math = m;

avg ( &ex1 );

getch ( );

}