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Факультет Физики и Инженерии

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**Отчет по лабораторной работе № 2**

**“*Представление чисел в электронных устройствах*”**

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Задание 1.

#include <stdio.h>

#include <conio.h>

int main()

{

int a1, a2, a3;

int max, min;

printf("Enter first int number\n");

scanf("%d", &a1);

printf("Enter second int number\n");

scanf("%d", &a2);

printf("Enter third int number\n");

scanf("%d", &a3);

max = a1;

if(max < a2)

max = a2;

if(max < a3)

max = a3;

min = a1;

if(min > a2)

min = a2;

if(min > a3)

min = a3;

printf("a) Sum of integers = %d\n", a1 + a2 + a3);

printf("b) Square of max = %d\n", max\*max);

printf("c) Double of min = %d\n", min\*2);

if((a1 + a2) > a3)

printf("d) Sum of first and second = %d\n", a1 + a2);

else

printf("d) Difference of first and second = %d\n", a1 - a2);

Задание 2.

#include <stdio.h>

#include <conio.h>

#include <math.h>

int main()

{

float b1, b2, b3, b4, b5;

float max1, max2, min1, min2;

printf("%s","Enter 5 float numbers\n");

scanf("%f%f%f%f%f", &b1,&b2,&b3,&b4,&b5);

max1 = b1;

if (max1 < b2)

max1 = b2;

if (max1 < b3)

max1 = b3;

if (max1 < b4)

max1 = b4;

if (max1 < b5)

max1 = b5;

if (max1 != b1)

max2 = b1;

else

max2 = b2;

if (max2 < b2 & max1 != b2)

max2 = b2;

if (max2 < b3 & max1 != b3)

max2 = b3;

if (max2 < b4 & max1 != b4)

max2 = b4;

if (max2 < b5 & max1 != b5)

max2 = b5;

min1 = b1;

if (min1 > b2)

min1 = b2;

if (min1 > b3)

min1 = b3;

if (min1 > b4)

min1 = b4;

if (min1 > b5)

min1 = b5;

if (min1 != b1)

min2 = b1;

else

min2 = b2;

if (min2 > b2 & min1 != b2)

min2 = b2;

if (min2 > b3 & min1 != b3)

min2 = b3;

if (min2 > b4 & min1 != b4)

min2 = b4;

if (min2 > b5 & min1 != b5)

min2 = b5;

printf("a)fabs(%f, %f, %f, %f, %f) = %f\n",

b1, b2, b3, b4, b5,sqrt(pow(b1 + b2 +b3 + b4 + b5,2)));

printf("b)First max = %f, Second max = %f\n", max1, max2);

printf("b)First min = %f, Second min = %f\n", min1, min2);

printf("b)Sum of 2 min amd 2 max = %f\n",

max1 + max2 + min1 + min2);

getch();

}

Задание 3.

#include <stdio.h>

#include <conio.h>

#include <math.h>

#include <string.h>

int main()

{

int c1, remainder, n, j;

float c2, octet;

char sixtet[] = "";

char copy;

puts("Enter int number");

scanf("%d",&c1);

puts("Enter float number");

scanf("%f",&c2);

remainder = c1;

octet = 0;

n = 0;

while (remainder != 0)

{

octet += (remainder % 8)\*pow(10.0,n);

n++;

remainder/=8;

}

printf("%d\n",remainder);

remainder = c1;

printf("%d\n",remainder);

while (remainder != 0)

{

int i;

for(i = strlen(sixtet); i > 0; i--)

sixtet[i]=sixtet[i-1];

if(remainder % 16 == 10)

sixtet[i] = 'A';

else if(remainder % 16 == 11)

sixtet[i] = 'B';

else if(remainder % 16 == 12)

sixtet[i] = 'C';

else if(remainder % 16 == 13)

sixtet[i] = 'D';

else if(remainder % 16 == 14)

sixtet[i] = 'E';

else if(remainder % 16 == 15)

sixtet[i] = 'F';

else

{

copy = remainder % 16 + '0';

sixtet[i] = '0'+remainder % 16 + '0';

}

remainder/=16;

}

printf("a)%d in 8 = %.0f\n", c1, octet);

printf("a)%d in 16 = ",c1);

sixtet[strlen(sixtet)] = '\0';

printf("%s",sixtet);

puts("");

printf("%.3f\n",c2);

getch();

}