Николич Сара
M3109

Отчёт №3

Лабораторные работы 9-12
вариант №16

9. лабораторная работа

```c
#include<stdio.h>

int main(){

    char text[50];
    printf("Input a sequence of characters -> ");
    scanf("%s", text);
    int textIndex = 0;

    while (text[textIndex] != '\0') {
        textIndex++;
    }
    printf("Your stuff is %d\n", textIndex);

    //int n;
    //char result[];
    printf("Input a number -> ");
    char *hello []= {"zero", "one", "two", "three", "four", "five", "six",
"seven", "eight", "nine"};
    int x;
    scanf("%d", &x);
    printf("\nYour number with letters is -> %s", hello[x]);



    return 0;
}
```

10. лабораторная работа

```c
#include<stdio.h>
#include<stdlib.h>
#include<math.h>

int nod(int x, int y){

    int res;
    if(x==y)
        return x;
    int d = x - y;
    if (d < 0){
        d = -d;
        res = nod(x, d);
    } else {
        res = nod(y, d);
    }
    return res;
}

int nok(int x, int y){

    return (x * y)/nod(x, y);

}

int noofnos(int x, int num){

    int result = x % 10;
    int arr[] = {0};
    for(int i = 0; i < num - 1; i++){
        arr[i] = result;
        x /= 10;
    }
    return arr;
}


int main() {

    //1 - NOD and NOK
    int n1, n2;
    printf("Enter 1st number -> ");
    scanf("%d", &n1);
    printf("Enter 2nd number -> ");
    scanf("%d", &n2);

    int result1;
    result1 = nod(n1, n2);
    printf("NOD is -> %d", result1);

    int result2;
    result2 = nok(n1, n2);
```

```c
    printf("\nNOK is -> %d", result2);

    //2 - arrays
    int n;
    printf("\nEnter a number of few digits -> ");
    scanf("%d", &n);
    int number = n;
    double len = (int)log10((double)number) + 1;
    int * arr = (int * )malloc(len * sizeof(int));
    int i = -1;
    int result;
    result = n;
    printf("\nYour array is -> ");
    while(i != len){
        i++;
        n = result;
        arr[i] = n % 10;
        result /= 10;
    }
    for(int j = i-1; j >= 0; j--){
        printf("%d ", arr[j]);
    }

   return 0;
}
```

11. лабораторная работа

```c
#include<stdio.h>
#include<math.h>
#include "functions.txt"

#define n 2

typedef struct triangle{
    double AB;
    double BC;
    double AC;
    double P;
    double p;
    double S;
    double A[n];
    double B[n];
    double C[n];
};

int main(){

    struct triangle s1;
    printf("Enter two coordinates of the vertex A -> ");
    scanf("%lf %lf", &s1.A[0], &s1.A[1]);
    printf("Enter two coordinates of the vertex B -> ");
    scanf("%lf %lf", &s1.B[0], &s1.B[1]);
    printf("Enter two coordinates of the vertex C -> ");
    scanf("%lf %lf", &s1.C[0], &s1.C[1]);

    s1.AB = side_length(s1.A[0], s1.A[1], s1.B[0], s1.B[1]);
    s1.BC = side_length(s1.B[0], s1.B[1], s1.C[0], s1.C[1]);
    s1.AC = side_length(s1.A[0], s1.A[1], s1.C[0], s1.C[1]);
    s1.P = perimetr(s1.AB, s1.AC, s1.BC);
    s1.p = small_perimetr(s1.P);
    s1.S = plosad(s1.p, s1.AB, s1.BC, s1.AC);
    printf("The perimetr is %.2lf\n", s1.P);
    printf("The plosad is %.2lf\n", s1.S);

    return 0;
}
```

12. лабораторная работа

```c
#include <dos.h>
#include<time.h>
#include <stdio.h>

int main(int argc,char *argv[])
{
    FILE *fp = fopen(argv[1], "w");
    time_t t;
    time(&t);

    //printf("\nThis program has been writeen at (date and time): %s",
ctime(&t));

    struct tm *local = localtime(&t);
    int hours, minutes, seconds, day, month, year;
    hours = local->tm_hour;
    minutes = local->tm_min;
    seconds = local->tm_sec;
    day = local->tm_mday;
    month = local->tm_mon+1;
    year = local->tm_year + 1900;
    //argc = day;

    for(int i = 0; i < 10; i++){
        fprintf(fp,"date is %02d/%02d/%d\n", day, month, year);
        day++;
    }

    return 0;
}
```