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| + | **Отчёт по лабораторной работе** №IX  по курсу 1 фундаментальная информатика  студента группы М8О-105Б-21 Бондаревой Елены Евгеньевны, № по списку 1  Контакты www, e-mail, icq, skype : lena\_bondareva\_03@mail.ru  Работа выполнена: «15» мая 2022г.  Преподаватель: каф.805 В.К.Титов  Входной контроль знаний с оценкой  Отчёт сдан «» , итоговая оценка  Подпись преподавателя |

**1. Тема**: «Сортировка и поиск»

**2. Цель работы**: Составить программу на языке Си с использованием процедур и функций для сортировки таблицы заданным методом и двоичного поиска по ключу в таблице.

**3. Задание** (вариант: 1*)*

Программа должна вводить значения элементов неупорядоченной таблицы и проверять работу процедуры сортировки в трех случаях: (1) элементы таблицы с самого начала упорядочены; (2) элементы таблицы расставлены в обратном порядке; (3) элементы таблицы не упорядочены. В последнем случае можно использовать встроенные процедуры генерации псевдослучайных чисел.

Для каждого вызова процедуры сортировки необходимо печатать исходное состояние таблицы и результаты сортировки. После выполнения сортировки программа должна вводить ключи и для каждого из них выполнить поиск в упорядоченной таблице с помощью процедуры двоичного поиска и печатать найденные элементы, если они присутствуют в таблице.

**Метод сортировки:** линейный выбор с обменом

**Структура таблицы:** тип ключа-комбинированный(целый+литера); хранение данных и ключей-отдельно; минимальное число элементов таблицы-17.

**4. Оборудование** (*лабораторное*):

ЭВМ -, процессор -, имя узла сети-с ОП -МБ

НМД -ГБ. Терминал - адрес -. Принтер -.

Другие устройства -.

*Оборудование ПЭВМ студента, если использовалось:*

Процессор Intel(R) Core(TM) i3-7020U CPU @ 2.30GHz , ОП 6 ГБ, НМД 240 ГБ. Монитор IPS 1920x1080

Другие устройства -.

**5. Программное обеспечение** (*лабораторное*):

Операционная система семейства -, наименование - версия -

Интерпретатор команд - версия -

Система программирования -версия -

Редактор текстов - версия -

Утилиты операционной системы -

Прикладные системы и программы -

Местонахождения и имена файлов программ и данных-

*Программное обеспечение ЭВМ студента, если использовалось:*

Операционная система семейства UNIX/GNU , наименование Ubuntu версия x86\_64

Интерпретатор команд bash

Редактор текстов emax

Утилиты операционной системы cat

Прикладные системы и программы VTM-diagram

Местонахождения и имена файлов программ и данных -

**6. Идея, метод, алгоритм** решения задачи (в формах: словесной, псевдокода, графической [блок-схема, диаграмма, рисунок, таблица] или формальное описание с пред- и постусловиями)

Необходимо составить программу на языке Си с использованием процедур и функций для сортировки таблицы заданным методом и двоичного поиска по ключу в таблице. Для начала создадим меню, которое выполняет 5 действий, первое: если данные отсортированы, то применяется бинарный поиск по ключу. Второе: сортирует таблицу и выводит ее(осуществляется метод четно-нечетной сортировки). Третье: строки таблицы в случайном порядке перемешиваются и происходит вывод таблицы на экран. Четвертое: осуществляется реверс, строки располагаются в обратном порядке, вывод таблицы. Пятое: выход, завершение программы.

**7.Сценарий выполнения работы** [план работы, первоначальный текст программы в черновике (можно на отдельном листе) и тесты, либо соображения по тестированию].

#include <stdio.h>

#include <stdlib.h>

int is\_sorted = 0;

struct Key{

//short im;

short re;

};

struct PoetryString{

Key key;

char \*string;

};

int get\_size(FILE \*input\_1, FILE \*input\_2){

int n = 0;

char \* buffer = new char [128];

size\_t l = sizeof(buffer);

while(!feof(input\_1)&&!feof(input\_2)){

getline(&buffer,&l, input\_2);

getline(&buffer,&l, input\_1);

n++;

}

delete [] buffer;

rewind(input\_1);

rewind(input\_2);

return n;

}

void print\_table(PoetryString \*table, int size){

for(int i = 0; i < size; ++i){

printf("%3hi ----- %s", table[i].key.re, table[i].string);

}

printf("\n");

}

PoetryString \* make\_table(FILE \*input\_1, FILE \*input\_2, int size){

PoetryString \*table = new PoetryString [size];

for (int i = 0; i < size; ++i){

table[i].string = new char[128];

}

for(int i = 0; i < size; ++i){

fscanf(input\_2, "%hi", &table[i].key.re);

fgets(table[i].string, 128, input\_1);

}

return table;

}

void sort\_table(PoetryString \* table, int n){

is\_sorted = 1;

PoetryString temp;

is\_sorted=0;

while (is\_sorted==0){

is\_sorted=1;

for (int i=0; i<n; i++){

int minPosition=i;

for (int j=i+1; j<n; j++)

if (table[minPosition].key.re > table[j].key.re){

minPosition=j;

temp=table[minPosition];

table[minPosition]=table[i];

table[i]=temp;

is\_sorted=0;

}

}

}

}

void swap\_strings(PoetryString\* table, int a, int b){

PoetryString temp;

temp = table[a];

table[a] = table[b];

table[b] = temp;

}

void mix\_table(PoetryString \*table, int size){

is\_sorted = 0;

int a, b;

for(int i = 0; i < size; ++i) {

a = rand() % size;

b = rand() % size;

swap\_strings(table, a, b);

}

}

int bin\_search(PoetryString \*table, Key key, int size){

int l = 0, r = size - 1, mid;

while (l <= r){

mid = (r + l)/2;

if(key.re == table[mid].key.re) return mid;

if(key.re < table[mid].key.re) r = mid;

if(key.re > table[mid].key.re) l = mid + 1;

}

return -1;

}

void reverse\_strings(PoetryString \*table, int size){

is\_sorted = 0;

for(int i = 0, j = size - 1; i < j; ++i, --j){

swap\_strings(table,i, j);

}

}

int main(){

FILE \*input\_1;

FILE \*input\_2;

if ((input\_1 = fopen("poetry.txt", "r")) == NULL){

printf("Error: can't input from poetry.txt\n");

return 1;

}

if ((input\_2 = fopen("kol\_keys.txt", "r")) == NULL){

printf("Error: can't input from kol\_keys.txt\n");

return 2;

}

int n = get\_size(input\_1, input\_2), action;

n--;

PoetryString \*table = make\_table(input\_1, input\_2, n);

print\_table(table, n);

while(true){

printf("Menu\n");

printf("1) Binary search\n");

printf("2) Sort\n");

printf("3) Mix\n");

printf("4) Reverse\n");

printf("5) Exit\n");

printf("Choose an action\n");

scanf("%d", &action);

switch (action){

case 1:{

if(is\_sorted){

printf("Enter the key: ");

Key k;scanf("%hi", &k.re);

int search;

printf("\n");

search = bin\_search(table, k, n);

if (search == -1){

printf("Element with such key is not found!\n");

break;

}

printf("Found the string:\n %s", table[search].string);

}

else printf("Table is not sorted!\n");

break;

}

case 2:{

sort\_table(table, n);

print\_table(table, n);

break;

}

case 3:{

mix\_table(table, n);

print\_table(table,n);

break;

}

case 4:{

reverse\_strings(table, n);

print\_table(table,n);

break;

}

case 5: return 0;

}

}

}

*Пункты 1-7 отчёта составляются* ***строго до*** *начала лабораторной работы.*

Допущен к выполнению работы. Подпись преподавателя

**8.Распечатка протокола** (подклеить листинг окончательного варианта программы с текстовыми примерами, подписанный преподавателем)

elena@elena-Aspire-A315-53G:~$ cat tit.txt

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~ ~

~ Лабораторная работа № IX ~

~ Сортировка и поиск ~

~ ~

~ Бондарева Елена ~

~ М8О-105Б-21 ~

~ ~

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elena@elena-Aspire-A315-53G:~$ cat 9.cpp

#include <stdio.h>

#include <stdlib.h>

int is\_sorted = 0;

struct Key{

//short im;

short re;

};

struct PoetryString{

Key key;

char \*string;

};

int get\_size(FILE \*input\_1, FILE \*input\_2){

int n = 0;

char \* buffer = new char [128];

size\_t l = sizeof(buffer);

while(!feof(input\_1)&&!feof(input\_2)){

getline(&buffer,&l, input\_2);

getline(&buffer,&l, input\_1);

n++;

}

delete [] buffer;

rewind(input\_1);

rewind(input\_2);

return n;

}

void print\_table(PoetryString \*table, int size){

for(int i = 0; i < size; ++i){

printf("%3hi ----- %s", table[i].key.re, table[i].string);

}

printf("\n");

}

PoetryString \* make\_table(FILE \*input\_1, FILE \*input\_2, int size){

PoetryString \*table = new PoetryString [size];

for (int i = 0; i < size; ++i){

table[i].string = new char[128];

}

for(int i = 0; i < size; ++i){

fscanf(input\_2, "%hi", &table[i].key.re);

fgets(table[i].string, 128, input\_1);

}

return table;

}

void sort\_table(PoetryString \* table, int n){

is\_sorted = 1;

PoetryString temp;

is\_sorted=0;

while (is\_sorted==0){

is\_sorted=1;

for (int i=0; i<n; i++){

int minPosition=i;

for (int j=i+1; j<n; j++)

if (table[minPosition].key.re > table[j].key.re){

minPosition=j;

temp=table[minPosition];

table[minPosition]=table[i];

table[i]=temp;

is\_sorted=0;

}

}

}

}

void swap\_strings(PoetryString\* table, int a, int b){

PoetryString temp;

temp = table[a];

table[a] = table[b];

table[b] = temp;

}

void mix\_table(PoetryString \*table, int size){

is\_sorted = 0;

int a, b;

for(int i = 0; i < size; ++i) {

a = rand() % size;

b = rand() % size;

swap\_strings(table, a, b);

}

}

int bin\_search(PoetryString \*table, Key key, int size){

int l = 0, r = size - 1, mid;

while (l <= r){

mid = (r + l)/2;

if(key.re == table[mid].key.re) return mid;

if(key.re < table[mid].key.re) r = mid;

if(key.re > table[mid].key.re) l = mid + 1;

}

return -1;

}

void reverse\_strings(PoetryString \*table, int size){

is\_sorted = 0;

for(int i = 0, j = size - 1; i < j; ++i, --j){

swap\_strings(table,i, j);

}

}

int main(){

FILE \*input\_1;

FILE \*input\_2;

if ((input\_1 = fopen("poetry.txt", "r")) == NULL){

printf("Error: can't input from poetry.txt\n");

return 1;

}

if ((input\_2 = fopen("kol\_keys.txt", "r")) == NULL){

printf("Error: can't input from kol\_keys.txt\n");

return 2;

}

int n = get\_size(input\_1, input\_2), action;

n--;

PoetryString \*table = make\_table(input\_1, input\_2, n);

print\_table(table, n);

while(true){

printf("Menu\n");

printf("1) Binary search\n");

printf("2) Sort\n");

printf("3) Mix\n");

printf("4) Reverse\n");

printf("5) Exit\n");

printf("Choose an action\n");

scanf("%d", &action);

switch (action){

case 1:{

if(is\_sorted){

printf("Enter the key: ");

Key k;scanf("%hi", &k.re);

int search;

printf("\n");

search = bin\_search(table, k, n);

if (search == -1){

printf("Element with such key is not found!\n");

break;

}

printf("Found the string:\n %s", table[search].string);

}

else printf("Table is not sorted!\n");

break;

}

case 2:{

sort\_table(table, n);

print\_table(table, n);

break;

}

case 3:{

mix\_table(table, n);

print\_table(table,n);

break;

}

case 4:{

reverse\_strings(table, n);

print\_table(table,n);

break;

}

case 5: return 0;

}

}

}

elena@elena-Aspire-A315-53G:~$ cat poetry.txt

I look out the window and think «Oh at last

The spring is a-coming and winter is past.»

The flowers in the dark earth are making their way

Towards the green grass, for to greet a new day.

First come the snowdrops, so pure and so white,

Standing out there in the brilliant sunlight.

Followed by crocuses, yellow, white, mauve,

I have in my garden a real treasure trove.

And now see the tulips of various hue

Colours of beauty for me and for you.

Look at the daffodil, trumpet so yellow

Bowing to nature and saying «hello»

The bluebells ring out and their lovely perfume

Together with primroses fill up my room.

The sweet scented violets awake in their beds.

And smile at the trees as they all nod their heads.

The sun in the sky and refreshing soft rain

Makes me happy to welcome the Springtime again.

elena@elena-Aspire-A315-53G:~$ cat kol\_keys.txt

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

elena@elena-Aspire-A315-53G:~$ g++ 9.cpp

elena@elena-Aspire-A315-53G:~$ ./a.out

1 ----- I look out the window and think «Oh at last

2 ----- The spring is a-coming and winter is past.»

3 ----- The flowers in the dark earth are making their way

4 ----- Towards the green grass, for to greet a new day.

5 ----- First come the snowdrops, so pure and so white,

6 ----- Standing out there in the brilliant sunlight.

7 ----- Followed by crocuses, yellow, white, mauve,

8 ----- I have in my garden a real treasure trove.

9 ----- And now see the tulips of various hue

10 ----- Colours of beauty for me and for you.

11 ----- Look at the daffodil, trumpet so yellow

12 ----- Bowing to nature and saying «hello»

13 ----- The bluebells ring out and their lovely perfume

14 ----- Together with primroses fill up my room.

15 ----- The sweet scented violets awake in their beds.

16 ----- And smile at the trees as they all nod their heads.

17 ----- The sun in the sky and refreshing soft rain

18 ----- Makes me happy to welcome the Springtime again.

Menu

1) Binary search

2) Sort

3) Mix

4) Reverse

5) Exit

Choose an action

2

1 ----- I look out the window and think «Oh at last

2 ----- The spring is a-coming and winter is past.»

3 ----- The flowers in the dark earth are making their way

4 ----- Towards the green grass, for to greet a new day.

5 ----- First come the snowdrops, so pure and so white,

6 ----- Standing out there in the brilliant sunlight.

7 ----- Followed by crocuses, yellow, white, mauve,

8 ----- I have in my garden a real treasure trove.

9 ----- And now see the tulips of various hue

10 ----- Colours of beauty for me and for you.

11 ----- Look at the daffodil, trumpet so yellow

12 ----- Bowing to nature and saying «hello»

13 ----- The bluebells ring out and their lovely perfume

14 ----- Together with primroses fill up my room.

15 ----- The sweet scented violets awake in their beds.

16 ----- And smile at the trees as they all nod their heads.

17 ----- The sun in the sky and refreshing soft rain

18 ----- Makes me happy to welcome the Springtime again.

Menu

1) Binary search

2) Sort

3) Mix

4) Reverse

5) Exit

Choose an action

1

Enter the key: 17

Found the string:

The sun in the sky and refreshing soft rain

Menu

1) Binary search

2) Sort

3) Mix

4) Reverse

5) Exit

Choose an action

3

11 ----- Look at the daffodil, trumpet so yellow

16 ----- And smile at the trees as they all nod their heads.

3 ----- The flowers in the dark earth are making their way

7 ----- Followed by crocuses, yellow, white, mauve,

10 ----- Colours of beauty for me and for you.

4 ----- Towards the green grass, for to greet a new day.

1 ----- I look out the window and think «Oh at last

14 ----- Together with primroses fill up my room.

15 ----- The sweet scented violets awake in their beds.

8 ----- I have in my garden a real treasure trove.

2 ----- The spring is a-coming and winter is past.»

12 ----- Bowing to nature and saying «hello»

5 ----- First come the snowdrops, so pure and so white,

18 ----- Makes me happy to welcome the Springtime again.

6 ----- Standing out there in the brilliant sunlight.

17 ----- The sun in the sky and refreshing soft rain

13 ----- The bluebells ring out and their lovely perfume

9 ----- And now see the tulips of various hue

Menu

1) Binary search

2) Sort

3) Mix

4) Reverse

5) Exit

Choose an action

1

Table is not sorted!

Menu

1) Binary search

2) Sort

3) Mix

4) Reverse

5) Exit

Choose an action

2

1 ----- I look out the window and think «Oh at last

2 ----- The spring is a-coming and winter is past.»

3 ----- The flowers in the dark earth are making their way

4 ----- Towards the green grass, for to greet a new day.

5 ----- First come the snowdrops, so pure and so white,

6 ----- Standing out there in the brilliant sunlight.

7 ----- Followed by crocuses, yellow, white, mauve,

8 ----- I have in my garden a real treasure trove.

9 ----- And now see the tulips of various hue

10 ----- Colours of beauty for me and for you.

11 ----- Look at the daffodil, trumpet so yellow

12 ----- Bowing to nature and saying «hello»

13 ----- The bluebells ring out and their lovely perfume

14 ----- Together with primroses fill up my room.

15 ----- The sweet scented violets awake in their beds.

16 ----- And smile at the trees as they all nod their heads.

17 ----- The sun in the sky and refreshing soft rain

18 ----- Makes me happy to welcome the Springtime again.

Menu

1) Binary search

2) Sort

3) Mix

4) Reverse

5) Exit

Choose an action

3

10 ----- Colours of beauty for me and for you.

9 ----- And now see the tulips of various hue

18 ----- Makes me happy to welcome the Springtime again.

14 ----- Together with primroses fill up my room.

15 ----- The sweet scented violets awake in their beds.

6 ----- Standing out there in the brilliant sunlight.

7 ----- Followed by crocuses, yellow, white, mauve,

8 ----- I have in my garden a real treasure trove.

12 ----- Bowing to nature and saying «hello»

1 ----- I look out the window and think «Oh at last

13 ----- The bluebells ring out and their lovely perfume

5 ----- First come the snowdrops, so pure and so white,

16 ----- And smile at the trees as they all nod their heads.

11 ----- Look at the daffodil, trumpet so yellow

17 ----- The sun in the sky and refreshing soft rain

3 ----- The flowers in the dark earth are making their way

4 ----- Towards the green grass, for to greet a new day.

2 ----- The spring is a-coming and winter is past.»

Menu

1) Binary search

2) Sort

3) Mix

4) Reverse

5) Exit

Choose an action

4

2 ----- The spring is a-coming and winter is past.»

4 ----- Towards the green grass, for to greet a new day.

3 ----- The flowers in the dark earth are making their way

17 ----- The sun in the sky and refreshing soft rain

11 ----- Look at the daffodil, trumpet so yellow

16 ----- And smile at the trees as they all nod their heads.

5 ----- First come the snowdrops, so pure and so white,

13 ----- The bluebells ring out and their lovely perfume

1 ----- I look out the window and think «Oh at last

12 ----- Bowing to nature and saying «hello»

8 ----- I have in my garden a real treasure trove.

7 ----- Followed by crocuses, yellow, white, mauve,

6 ----- Standing out there in the brilliant sunlight.

15 ----- The sweet scented violets awake in their beds.

14 ----- Together with primroses fill up my room.

18 ----- Makes me happy to welcome the Springtime again.

9 ----- And now see the tulips of various hue

10 ----- Colours of beauty for me and for you.

Menu

1) Binary search

2) Sort

3) Mix

4) Reverse

5) Exit

Choose an action

2

1 ----- I look out the window and think «Oh at last

2 ----- The spring is a-coming and winter is past.»

3 ----- The flowers in the dark earth are making their way

4 ----- Towards the green grass, for to greet a new day.

5 ----- First come the snowdrops, so pure and so white,

6 ----- Standing out there in the brilliant sunlight.

7 ----- Followed by crocuses, yellow, white, mauve,

8 ----- I have in my garden a real treasure trove.

9 ----- And now see the tulips of various hue

10 ----- Colours of beauty for me and for you.

11 ----- Look at the daffodil, trumpet so yellow

12 ----- Bowing to nature and saying «hello»

13 ----- The bluebells ring out and their lovely perfume

14 ----- Together with primroses fill up my room.

15 ----- The sweet scented violets awake in their beds.

16 ----- And smile at the trees as they all nod their heads.

17 ----- The sun in the sky and refreshing soft rain

18 ----- Makes me happy to welcome the Springtime again.

Menu

1) Binary search

2) Sort

3) Mix

4) Reverse

5) Exit

Choose an action

1

Enter the key: 16

Found the string:

And smile at the trees as they all nod their heads.

Menu

1) Binary search

2) Sort

3) Mix

4) Reverse

5) Exit

Choose an action

2

1 ----- I look out the window and think «Oh at last

2 ----- The spring is a-coming and winter is past.»

3 ----- The flowers in the dark earth are making their way

4 ----- Towards the green grass, for to greet a new day.

5 ----- First come the snowdrops, so pure and so white,

6 ----- Standing out there in the brilliant sunlight.

7 ----- Followed by crocuses, yellow, white, mauve,

8 ----- I have in my garden a real treasure trove.

9 ----- And now see the tulips of various hue

10 ----- Colours of beauty for me and for you.

11 ----- Look at the daffodil, trumpet so yellow

12 ----- Bowing to nature and saying «hello»

13 ----- The bluebells ring out and their lovely perfume

14 ----- Together with primroses fill up my room.

15 ----- The sweet scented violets awake in their beds.

16 ----- And smile at the trees as they all nod their heads.

17 ----- The sun in the sky and refreshing soft rain

18 ----- Makes me happy to welcome the Springtime again.

Menu

1) Binary search

2) Sort

3) Mix

4) Reverse

5) Exit

Choose an action

1

Enter the key: 27

Element with such key is not found!

Menu

1) Binary search

2) Sort

3) Mix

4) Reverse

5) Exit

Choose an action

3

17 ----- The sun in the sky and refreshing soft rain

11 ----- Look at the daffodil, trumpet so yellow

6 ----- Standing out there in the brilliant sunlight.

18 ----- Makes me happy to welcome the Springtime again.

5 ----- First come the snowdrops, so pure and so white,

1 ----- I look out the window and think «Oh at last

9 ----- And now see the tulips of various hue

7 ----- Followed by crocuses, yellow, white, mauve,

10 ----- Colours of beauty for me and for you.

8 ----- I have in my garden a real treasure trove.

15 ----- The sweet scented violets awake in their beds.

3 ----- The flowers in the dark earth are making their way

16 ----- And smile at the trees as they all nod their heads.

14 ----- Together with primroses fill up my room.

13 ----- The bluebells ring out and their lovely perfume

12 ----- Bowing to nature and saying «hello»

2 ----- The spring is a-coming and winter is past.»

4 ----- Towards the green grass, for to greet a new day.

Menu

1) Binary search

2) Sort

3) Mix

4) Reverse

5) Exit

Choose an action

1

Table is not sorted!

Menu

1) Binary search

2) Sort

3) Mix

4) Reverse

5) Exit

Choose an action

2

1 ----- I look out the window and think «Oh at last

2 ----- The spring is a-coming and winter is past.»

3 ----- The flowers in the dark earth are making their way

4 ----- Towards the green grass, for to greet a new day.

5 ----- First come the snowdrops, so pure and so white,

6 ----- Standing out there in the brilliant sunlight.

7 ----- Followed by crocuses, yellow, white, mauve,

8 ----- I have in my garden a real treasure trove.

9 ----- And now see the tulips of various hue

10 ----- Colours of beauty for me and for you.

11 ----- Look at the daffodil, trumpet so yellow

12 ----- Bowing to nature and saying «hello»

13 ----- The bluebells ring out and their lovely perfume

14 ----- Together with primroses fill up my room.

15 ----- The sweet scented violets awake in their beds.

16 ----- And smile at the trees as they all nod their heads.

17 ----- The sun in the sky and refreshing soft rain

18 ----- Makes me happy to welcome the Springtime again.

Menu

1) Binary search

2) Sort

3) Mix

4) Reverse

5) Exit

Choose an action

1

Enter the key: 5

Found the string:

First come the snowdrops, so pure and so white,

Menu

1) Binary search

2) Sort

3) Mix

4) Reverse

5) Exit

Choose an action

3

1 ----- I look out the window and think «Oh at last

2 ----- The spring is a-coming and winter is past.»

9 ----- And now see the tulips of various hue

3 ----- The flowers in the dark earth are making their way

15 ----- The sweet scented violets awake in their beds.

8 ----- I have in my garden a real treasure trove.

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4 ----- Towards the green grass, for to greet a new day.

12 ----- Bowing to nature and saying «hello»

Menu

1) Binary search

2) Sort

3) Mix

4) Reverse

5) Exit

Choose an action

4

12 ----- Bowing to nature and saying «hello»

4 ----- Towards the green grass, for to greet a new day.

17 ----- The sun in the sky and refreshing soft rain

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9 ----- And now see the tulips of various hue

2 ----- The spring is a-coming and winter is past.»

1 ----- I look out the window and think «Oh at last

Menu

1) Binary search

2) Sort

3) Mix

4) Reverse

5) Exit

Choose an action

5

**9. Дневник отладки** должен содержать дату и время сеансов отладки, и основные ошибки (ошибки в сценарии и программе, не стандартные операции) и краткие комментарии к ним. В дневнике отладки приводятся сведения об использовании других ЭВМ, существенном участии преподавателя и других лиц в написании и отладке программы.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| № | Лаб.  или  дом. | Дата | Время | Событие | Действие по исправлению | Примечание |
| 1 | дом | 15.05.  2022 | 10:45 | В одной из функций не поставила «;» после написания *printf("\n")* | Внимательно писать код |  |

**10**. Замечание автора по существу работы

**11.** Выводы:

В результате выполнения работы я составила программу на языке Си с использованием процедур и функций для сортировки таблицы заданным методом и двоичного поиска по ключу в таблице, а также приобрела необходимые для этого знания.

Недочеты, допущенные при выполнении задания, могут быть устранены следующим образом

Подпись студента