LAPORAN TUGAS KECIL 1

IF2211 – STRATEGI ALGORITMA

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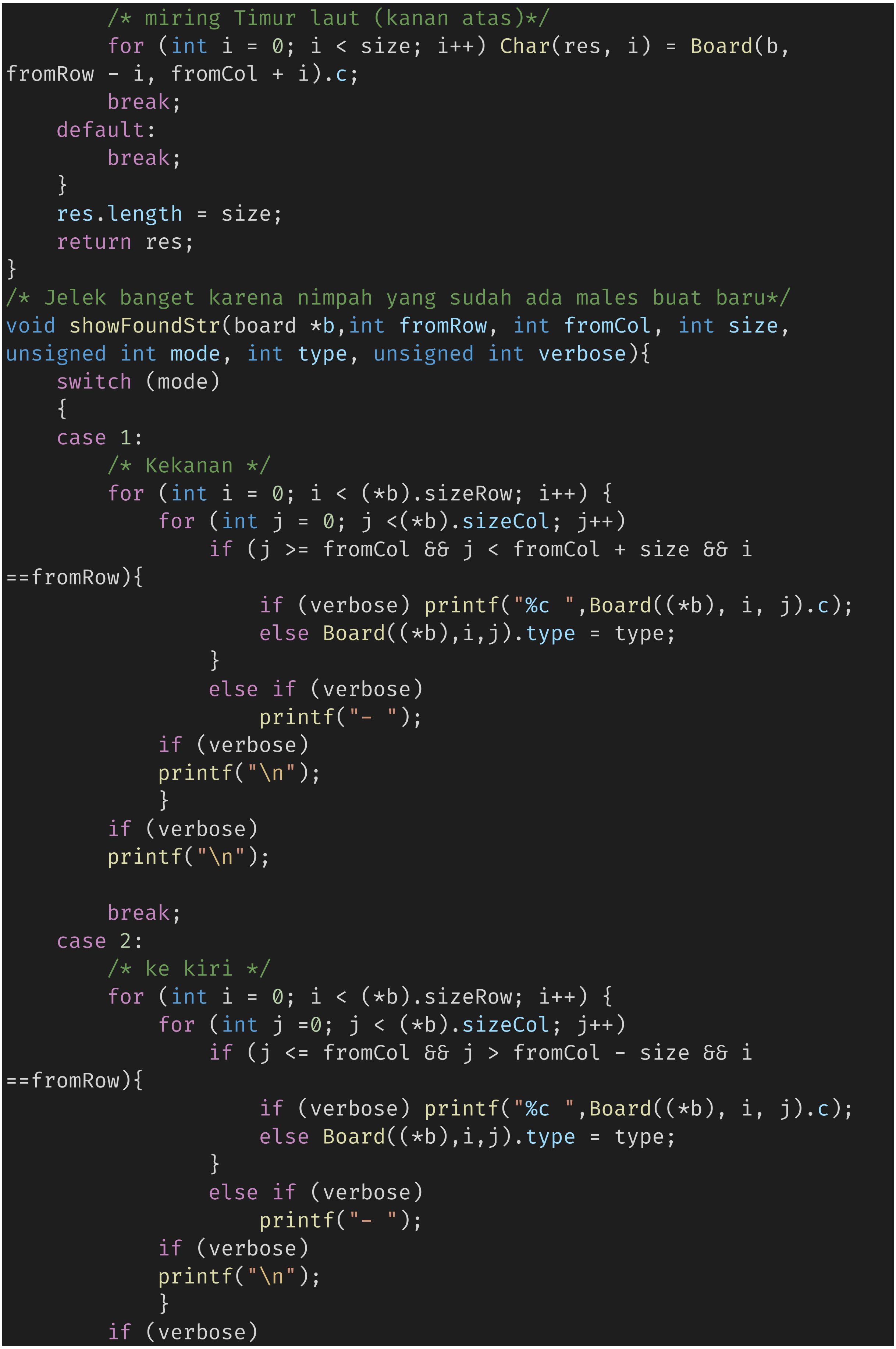
1. Algoritma Brute Force

Algoritma *brute-force* yang saya gunakan dilakukan dengan cara menjadikan semua huruf pada tabel board puzzle menjadi huruf pertama string tiap perbandingan dan mengambil huruf setelah tiap huruf tersebut sehingga string yang dibandingkan jumlahnya bersesusaian dengan tiap solusi, pengambilan huruf dilakukan dalam 8 arah (mengikuti 8 arah mata angin). Setelah mendapatkan string tersebut maka dicocokan dengan tiap solusi, jika terdapat match maka akan ditulis pada output. Pencocokan string dilakukan dengan mengecek tiap huruf pada string yang didapatkan dengan string solusi jika terdapat 1 kali kesalahan maka akan langsung mengembalikan nilai false.

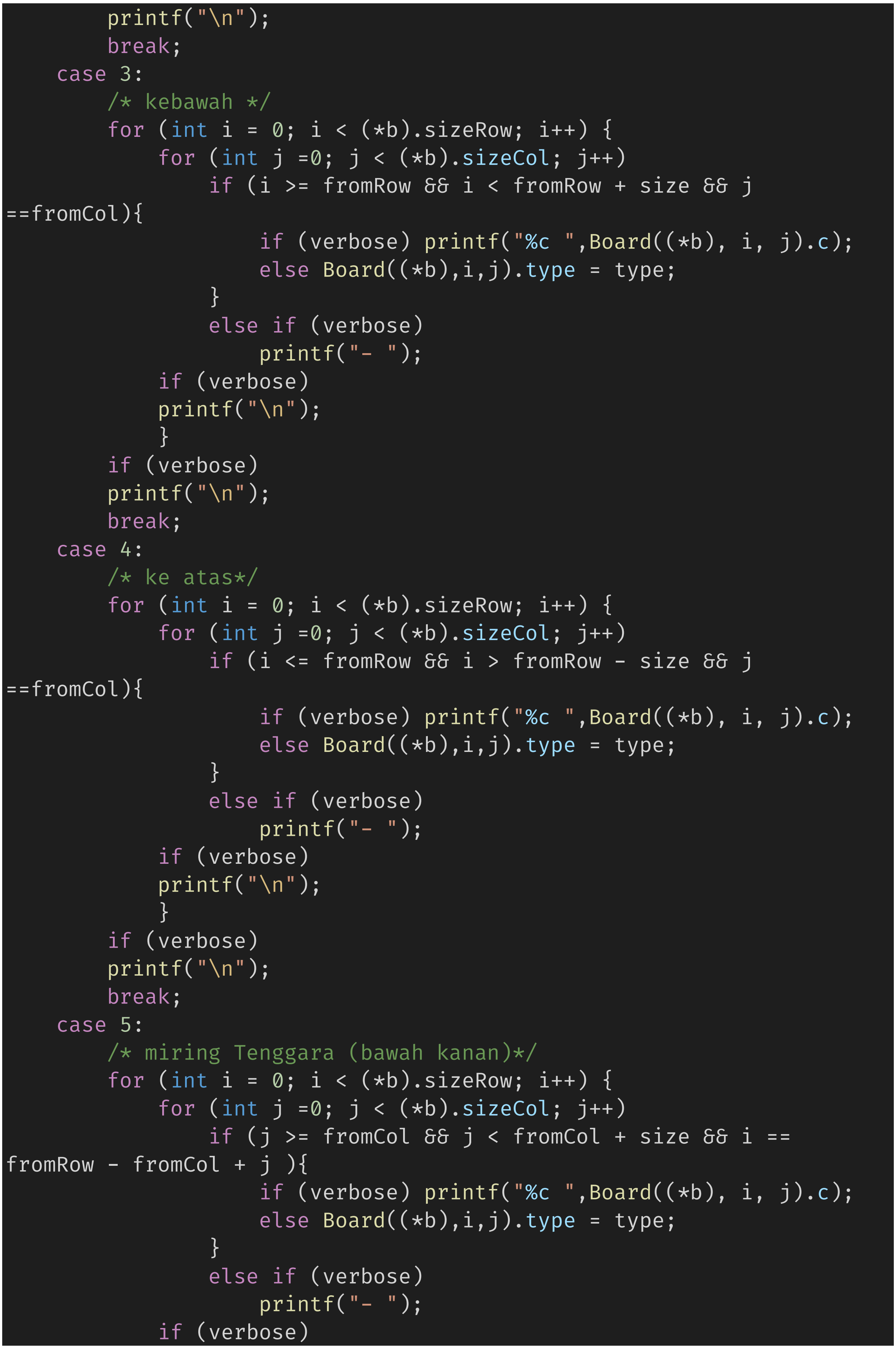
2. Source Program

```c
#include <stdio.h>
#include <stdlib.h>
#include <time.h>
#define MaxChar 100
#define boardSize 100

#define RED "\033[0;31m"
#define GREEN "\033[0;32m"
#define Yellow "\033[0;33m"
#define Blue "\033[0;34m"
#define Purple "\033[0;35m"
#define Cyan "\033[0;36m"
#define reset "\033[0m"

typedef struct string
{
    char buff[MaxChar];
    int length;
} string;

#define Char(S, i) (S).buff[i]

void printString(string s){
    for (int i = 0; i < s.length; i++){
        printf("%c", Char(s, i));
    };
    printf("\n");
}
typedef struct colorChar{
    char c;
    int type;
} colorChar;
typedef struct board
{
    colorChar buff[boardSize][boardSize];
    int sizeRow,sizeCol;
} board;
```

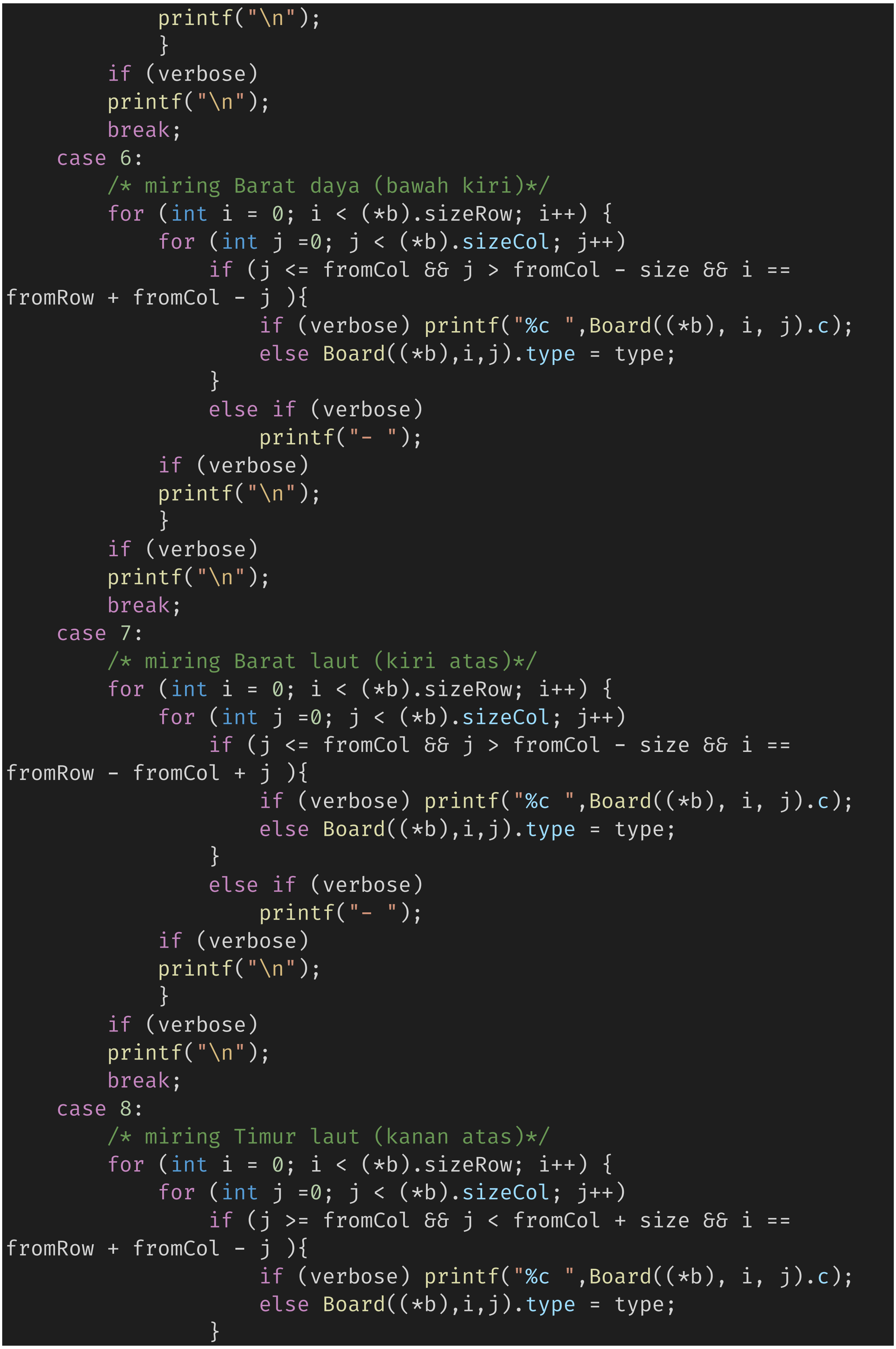
```
int ansCount;
char fileName[22] = "../test/testcasex.txt";
int testCount = 0;

#define Board(S, i, j) (S).buff[i][j]

string takeStringfromBoard(board b, int fromRow, int fromCol, int
size, unsigned int mode){
    string res;
    int count = 0;
    switch (mode)
    {
    case 1:
        /* Kekanan */
        for (int i = 0; i < size; i++) Char(res, i) = Board(b,
fromRow, fromCol + i).c;
        break;
    case 2:
        /* ke kiri */
        for (int i = 0; i < size; i++) Char(res, i) = Board(b,
fromRow, fromCol - i).c;
        break;
    case 3:
        /* kebawah */
        for (int i = 0; i < size; i++) Char(res, i) = Board(b,
fromRow + i, fromCol).c;
        break;
    case 4:
        /* ke atas*/
        for (int i = 0; i < size; i++) Char(res, i) = Board(b,
fromRow - i, fromCol).c;
        break;
    case 5:
        /* miring Tenggara (bawah kanan)*/
        for (int i = 0; i < size; i++) Char(res, i) = Board(b,
fromRow + i, fromCol + i).c;
        break;
    case 6:
        /* miring Barat daya (bawah kiri)*/
        for (int i = 0; i < size; i++) Char(res, i) = Board(b,
fromRow + i, fromCol - i).c;
        break;
    case 7:
        /* miring Barat laut (kiri atas)*/
        for (int i = 0; i < size; i++) Char(res, i) = Board(b,
fromRow - i, fromCol - i).c;
        break;
    case 8:
```



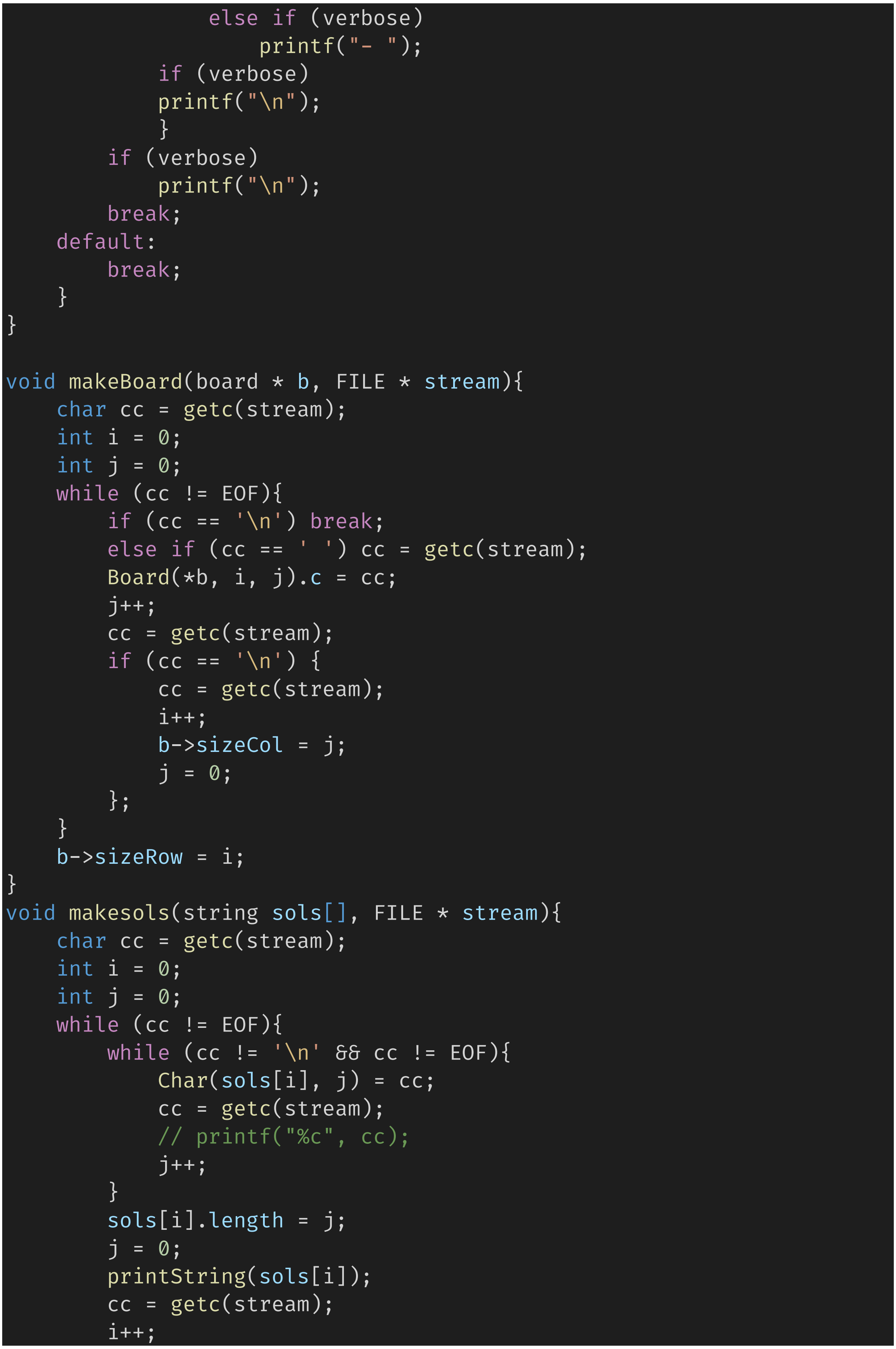
```
        /* miring Timur laut (kanan atas)*/
        for (int i = 0; i < size; i++) Char(res, i) = Board(b,
fromRow - i, fromCol + i).c;
        break;
    default:
        break;
    }
    res.length = size;
    return res;
}
/* Jelek banget karena nimpah yang sudah ada males buat baru*/
void showFoundStr(board *b,int fromRow, int fromCol, int size,
unsigned int mode, int type, unsigned int verbose){
    switch (mode)
    {
    case 1:
        /* Kekanan */
        for (int i = 0; i < (*b).sizeRow; i++) {
            for (int j = 0; j <(*b).sizeCol; j++)
                if (j >= fromCol && j < fromCol + size && i
==fromRow){
                    if (verbose) printf("%c ",Board((*b), i, j).c);
                    else Board((*b),i,j).type = type;
                }
                else if (verbose)
                    printf("- ");
            if (verbose)
            printf("\n");
            }
        if (verbose)
        printf("\n");

        break;
    case 2:
        /* ke kiri */
        for (int i = 0; i < (*b).sizeRow; i++) {
            for (int j =0; j < (*b).sizeCol; j++)
                if (j <= fromCol && j > fromCol - size && i
==fromRow){
                    if (verbose) printf("%c ",Board((*b), i, j).c);
                    else Board((*b),i,j).type = type;
                }
                else if (verbose)
                    printf("- ");
            if (verbose)
            printf("\n");
            }
        if (verbose)
```



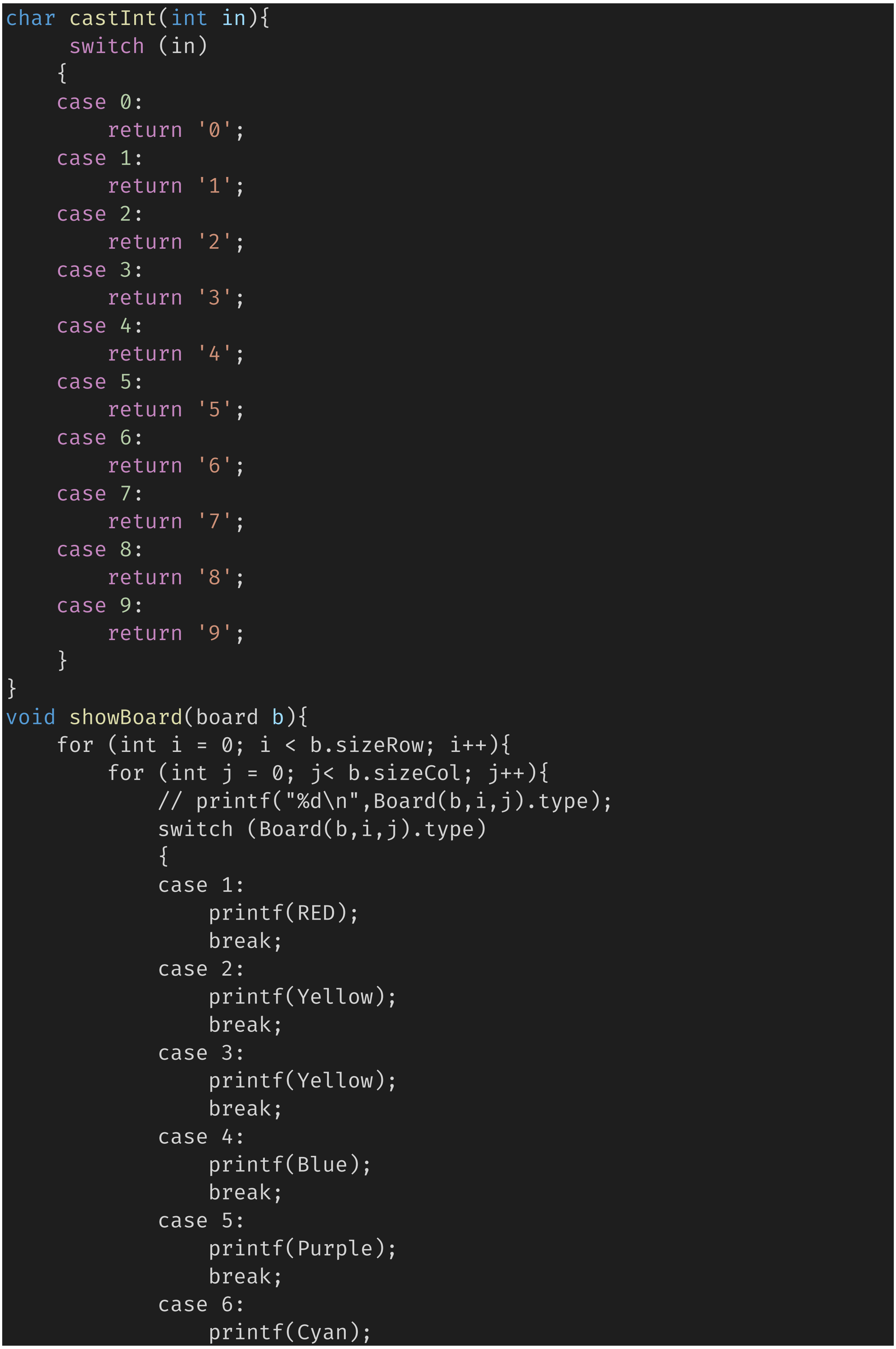
```
        printf("\n");
        break;
    case 3:
        /* kebawah */
        for (int i = 0; i < (*b).sizeRow; i++) {
            for (int j =0; j < (*b).sizeCol; j++)
                if (i >= fromRow && i < fromRow + size && j
==fromCol){
                    if (verbose) printf("%c ",Board((*b), i, j).c);
                    else Board((*b),i,j).type = type;
                }
                else if (verbose)
                    printf("- ");
            if (verbose)
            printf("\n");
            }
        if (verbose)
        printf("\n");
        break;
    case 4:
        /* ke atas*/
        for (int i = 0; i < (*b).sizeRow; i++) {
            for (int j =0; j < (*b).sizeCol; j++)
                if (i <= fromRow && i > fromRow - size && j
==fromCol){
                    if (verbose) printf("%c ",Board((*b), i, j).c);
                    else Board((*b),i,j).type = type;
                }
                else if (verbose)
                    printf("- ");
            if (verbose)
            printf("\n");
            }
        if (verbose)
        printf("\n");
        break;
    case 5:
        /* miring Tenggara (bawah kanan)*/
        for (int i = 0; i < (*b).sizeRow; i++) {
            for (int j =0; j < (*b).sizeCol; j++)
                if (j >= fromCol && j < fromCol + size && i ==
fromRow - fromCol + j ){
                    if (verbose) printf("%c ",Board((*b), i, j).c);
                    else Board((*b),i,j).type = type;
                }
                else if (verbose)
                    printf("- ");
            if (verbose)
```



```
            printf("\n");
            }
        if (verbose)
        printf("\n");
        break;
    case 6:
        /* miring Barat daya (bawah kiri)*/
        for (int i = 0; i < (*b).sizeRow; i++) {
            for (int j =0; j < (*b).sizeCol; j++)
                if (j <= fromCol && j > fromCol - size && i ==
fromRow + fromCol - j ){
                    if (verbose) printf("%c ",Board((*b), i, j).c);
                    else Board((*b),i,j).type = type;
                }
                else if (verbose)
                    printf("- ");
            if (verbose)
            printf("\n");
            }
        if (verbose)
        printf("\n");
        break;
    case 7:
        /* miring Barat laut (kiri atas)*/
        for (int i = 0; i < (*b).sizeRow; i++) {
            for (int j =0; j < (*b).sizeCol; j++)
                if (j <= fromCol && j > fromCol - size && i ==
fromRow - fromCol + j ){
                    if (verbose) printf("%c ",Board((*b), i, j).c);
                    else Board((*b),i,j).type = type;
                }
                else if (verbose)
                    printf("- ");
            if (verbose)
            printf("\n");
            }
        if (verbose)
        printf("\n");
        break;
    case 8:
        /* miring Timur laut (kanan atas)*/
        for (int i = 0; i < (*b).sizeRow; i++) {
            for (int j =0; j < (*b).sizeCol; j++)
                if (j >= fromCol && j < fromCol + size && i ==
fromRow + fromCol - j ){
                    if (verbose) printf("%c ",Board((*b), i, j).c);
                    else Board((*b),i,j).type = type;
                }
```

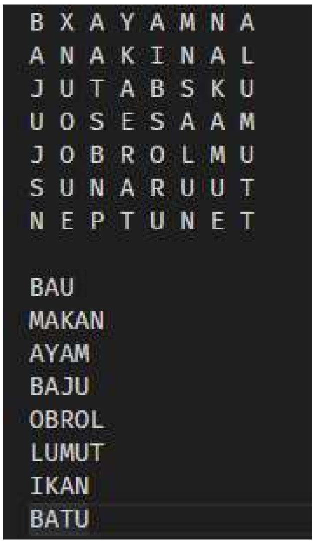


```
                else if (verbose)
                    printf("- ");
            if (verbose)
            printf("\n");
            }
        if (verbose)
            printf("\n");
        break;
    default:
        break;
    }
}

void makeBoard(board * b, FILE * stream){
    char cc = getc(stream);
    int i = 0;
    int j = 0;
    while (cc != EOF){
        if (cc == '\n') break;
        else if (cc == ' ') cc = getc(stream);
        Board(*b, i, j).c = cc;
        j++;
        cc = getc(stream);
        if (cc == '\n') {
            cc = getc(stream);
            i++;
            b->sizeCol = j;
            j = 0;
        };
    }
    b->sizeRow = i;
}
void makesols(string sols[], FILE * stream){
    char cc = getc(stream);
    int i = 0;
    int j = 0;
    while (cc != EOF){
        while (cc != '\n' && cc != EOF){
            Char(sols[i], j) = cc;
            cc = getc(stream);
            // printf("%c", cc);
            j++;
        }
        sols[i].length = j;
        j = 0;
        printString(sols[i]);
        cc = getc(stream);
        i++;
    }
    ansCount = i;
}
unsigned int strcmpr(string A, string B){
    if (B.length < A.length) return 0;
    for (int i = 0; i < A.length; i++) {
        testCount++;
        if (Char(A, i) != Char(B, i)) return 0;
    };
    return 1;
}

int solve(board *b, string sols[], unsigned int verbose){
    int count = 0;
    int cType = 1;
    for (int i = 0; i < (*b).sizeRow;i++){
        for (int j = 0; j < (*b).sizeCol; j++){
                for (int k = 0; k < ansCount; k++){
                    if (cType > 6) cType = 1;
                    if (sols[k].length > 1){
                    for (int l = 1; l <= 8; l++) if (strcmpr(sols[k],
takeStringfromBoard((*b), i, j, sols[k].length, l))){
                        count++;
                        if (verbose)
                        printf("\n%d. \n",count);
                        showFoundStr(b, i, j, sols[k].length, l,
cType, verbose);
                        cType++;
                    }
                    }
                    else if (sols[k].length = 1){
                        if (strcmpr(sols[k],
takeStringfromBoard((*b), i, j, sols[k].length, 1)))
                        {
                            count++;
                            if (verbose)
                            printf("\n%d. \n",count);
                            showFoundStr(b, i, j, sols[k].length, 1,
cType, verbose);
                            cType++;
                        }
                    }

                }
        }
    }
    return count;
}
```

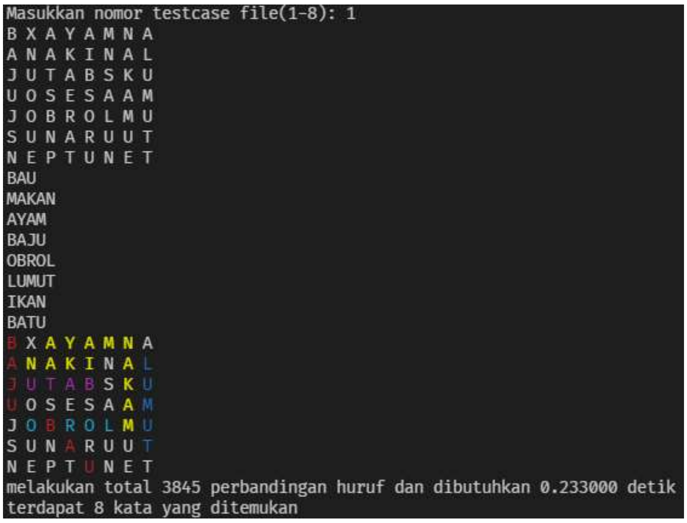


```
char castInt(int in){
     switch (in)
    {
    case 0:
        return '0';
    case 1:
        return '1';
    case 2:
        return '2';
    case 3:
        return '3';
    case 4:
        return '4';
    case 5:
        return '5';
    case 6:
        return '6';
    case 7:
        return '7';
    case 8:
        return '8';
    case 9:
        return '9';
    }
}
void showBoard(board b){
    for (int i = 0; i < b.sizeRow; i++){
        for (int j = 0; j< b.sizeCol; j++){
            // printf("%d\n",Board(b,i,j).type);
            switch (Board(b,i,j).type)
            {
            case 1:
                printf(RED);
                break;
            case 2:
                printf(Yellow);
                break;
            case 3:
                printf(Yellow);
                break;
            case 4:
                printf(Blue);
                break;
            case 5:
                printf(Purple);
                break;
            case 6:
                printf(Cyan);
                break;
            default:
                printf(reset);
                break;
            }
            printf("%c " reset, Board(b, i, j).c);
        }
        printf("\n");
    }
}
int main(){
    int x;
    board b;
    string sols[15];
    printf("Masukkan nomor testcase file(1-8): ");
    scanf("%d",&x);
    fileName[16] = castInt(x);
    FILE *txt = fopen(fileName, "r");
    makeBoard(&b, txt);
    showBoard(b);
    makesols(sols, txt);
    clock_t start,end;
    start = clock();
    int count = solve(&b, sols, 0);
    showBoard(b);
    end = clock();
    printf("melakukan total %d perbandingan huruf dan dibutuhkan %lf
detik \n", testCount,(double)(end-start)/CLOCKS_PER_SEC);
    printf("terdapat %d kata yang ditemukan\n", count);
    fclose(txt);
}
```

3. Skrinshut *input* dan *output*

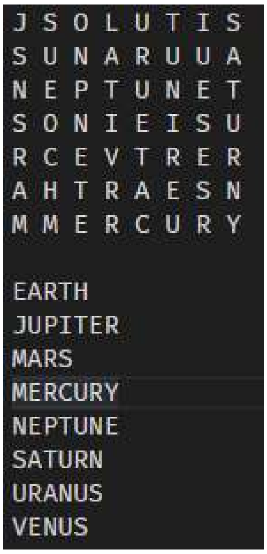


```
B X A Y A M N A
A N A K I N A L
J U T A B S K U
U O S E S A A M
J O B R O L M U
S U N A R U U T
N E P T U N E T

BAU
MAKAN
AYAM
BAJU
OBROL
LUMUT
IKAN
BATU
```

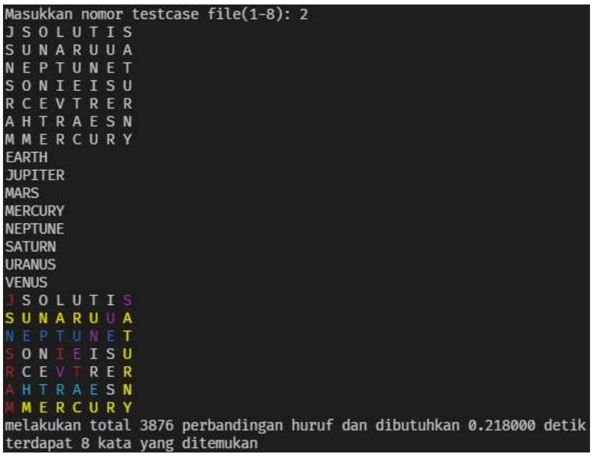


```
Masukkan nomor testcase file(1-8): 1
B X A Y A M N A
A N A K I N A L
J U T A B S K U
U O S E S A A M
J O B R O L M U
S U N A R U U T
N E P T U N E T
BAU
MAKAN
AYAM
BAJU
OBROL
LUMUT
IKAN
BATU
B X A Y A M N A
A N A K I N A L
J U T A B S K U
U O S E S A A M
J O B R O L M U
S U N A R U U T
N E P T U N E T
melakukan total 3845 perbandingan huruf dan dibutuhkan 0.233000 detik
terdapat 8 kata yang ditemukan
```

Gambar 3.1 testcase1 (small) dan outputnya pada program

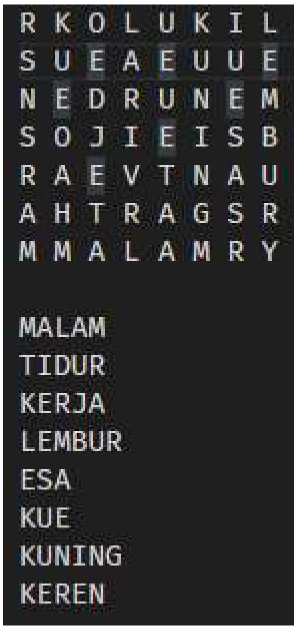


```
J S O L U T I S
S U N A R U U A
N E P T U N E T
S O N I E I S U
R C E V T R E R
A H T R A E S N
M M E R C U R Y

EARTH
JUPITER
MARS
MERCURY
NEPTUNE
SATURN
URANUS
VENUS
```

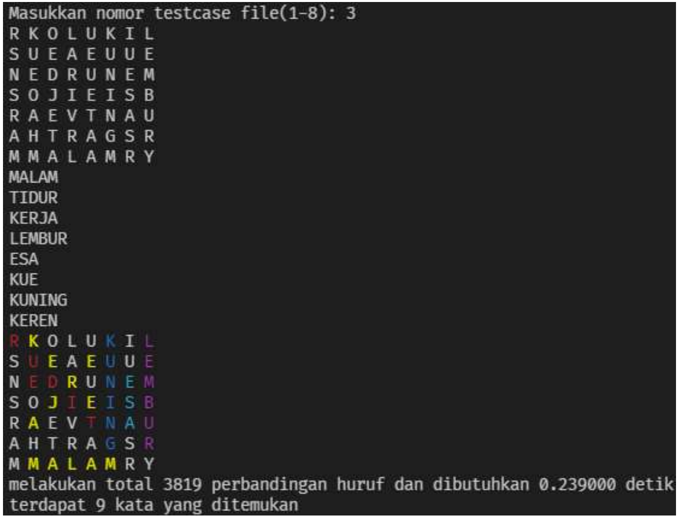


```
Masukkan nomor testcase file(1-8): 2
J S O L U T I S
S U N A R U U A
N E P T U N E T
S O N I E I S U
R C E V T R E R
A H T R A E S N
M M E R C U R Y
EARTH
JUPITER
MARS
MERCURY
NEPTUNE
SATURN
URANUS
VENUS
J S O L U T I S
S U N A R U U A
N E P T U N E T
S O N I E I S U
R C E V T R E R
A H T R A E S N
M M E R C U R Y
melakukan total 3876 perbandingan huruf dan dibutuhkan 0.218000 detik
terdapat 8 kata yang ditemukan
```

Gambar 3.2 testcase2 (small) dan outputnya pada program

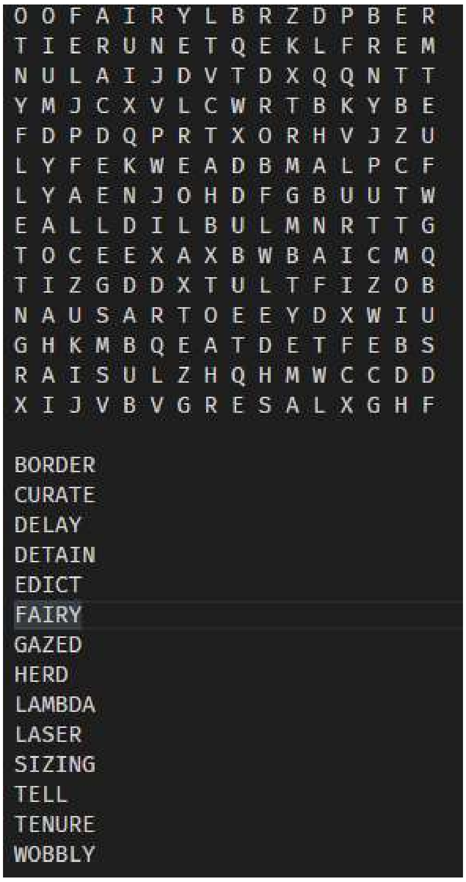


```
R K O L U K I L
S U E A E U U E
N E D R U N E M
S O J I E I S B
R A E V T N A U
A H T R A G S R
M M A L A M R Y

MALAM
TIDUR
KERJA
LEMBUR
ESA
KUE
KUNING
KEREN
```

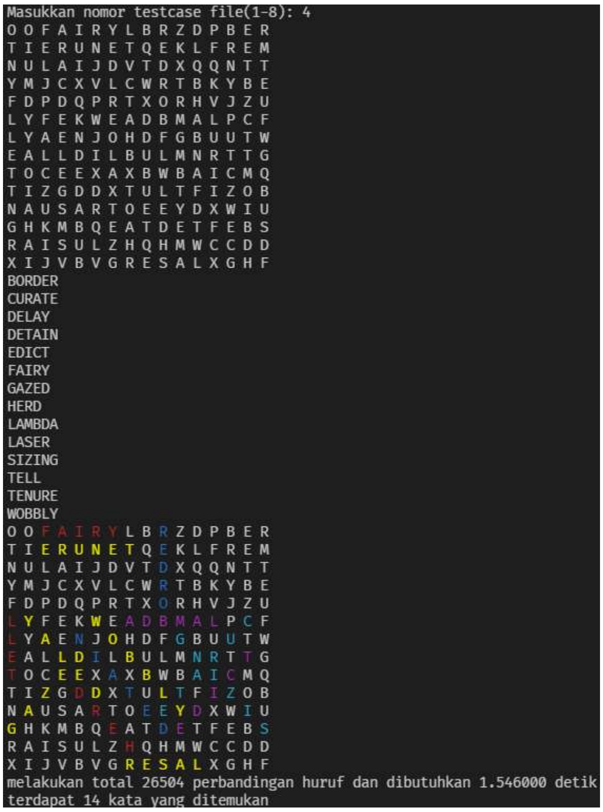


```
Masukkan nomor testcase file(1-8): 3
R K O L U K I L
S U E A E U U E
N E D R U N E M
S O J I E I S B
R A E V T N A U
A H T R A G S R
M M A L A M R Y
MALAM
TIDUR
KERJA
LEMBUR
ESA
KUE
KUNING
KEREN
R K O L U K I L
S U E A E U U E
N E D R U N E M
S O J I E I S B
R A E V T N A U
A H T R A G S R
M M A L A M R Y
melakukan total 3819 perbandingan huruf dan dibutuhkan 0.239000 detik
terdapat 9 kata yang ditemukan
```

Gambar 3.3 testcase3 (small) dan outputnya pada program

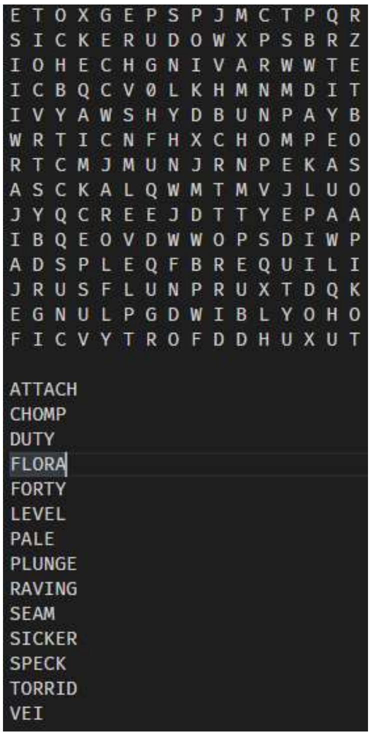


```
O O F A I R Y L B R Z D P B E R
T I E R U N E T Q E K L F R E M
N U L A I J D V T D X Q Q N T T
Y M J C X V L C W R T B K Y B E
F D P D Q P R T X O R H V J Z U
L Y F E K W E A D B M A L P C F
L Y A E N J O H D F G B U U T W
E A L L D I L B U L M N R T T G
T O C E E X A X B W B A I C M Q
T I Z G D D X T U L T F I Z O B
N A U S A R T O E E Y D X W I U
G H K M B Q E A T D E T F E B S
R A I S U L Z H Q H M W C C D D
X I J V B V G R E S A L X G H F

BORDER
CURATE
DELAY
DETAIN
EDICT
FAIRY
GAZED
HERD
LAMBDA
LASER
SIZING
TELL
TENURE
WOBBLY
```

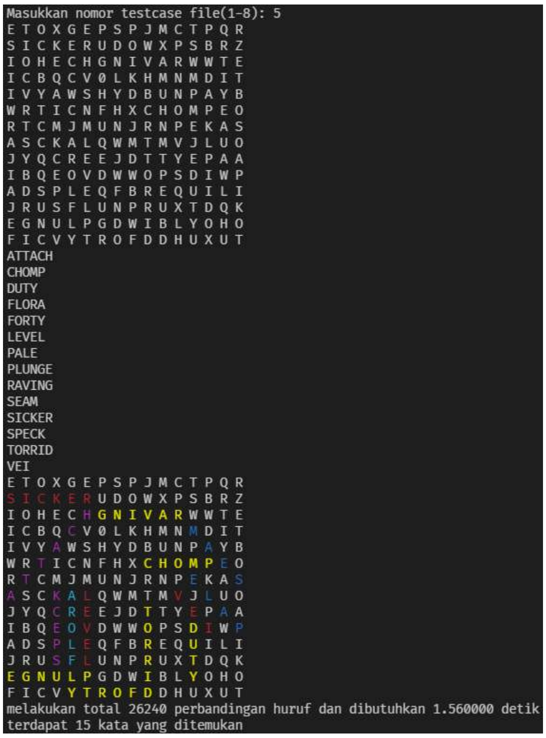


```
Masukkan nomor testcase file(1-8): 4
O O F A I R Y L B R Z D P B E R
T I E R U N E T Q E K L F R E M
N U L A I J D V T D X Q Q N T T
Y M J C X V L C W R T B K Y B E
F D P D Q P R T X O R H V J Z U
L Y F E K W E A D B M A L P C F
L Y A E N J O H D F G B U U T W
E A L L D I L B U L M N R T T G
T O C E E X A X B W B A I C M Q
T I Z G D D X T U L T F I Z O B
N A U S A R T O E E Y D X W I U
G H K M B Q E A T D E T F E B S
R A I S U L Z H Q H M W C C D D
X I J V B V G R E S A L X G H F
BORDER
CURATE
DELAY
DETAIN
EDICT
FAIRY
GAZED
HERD
LAMBDA
LASER
SIZING
TELL
TENURE
WOBBLY
O O F A I R Y L B R Z D P B E R
T I E R U N E T Q E K L F R E M
N U L A I J D V T D X Q Q N T T
Y M J C X V L C W R T B K Y B E
F D P D Q P R T X O R H V J Z U
L Y F E K W E A D B M A L P C F
L Y A E N J O H D F G B U U T W
E A L L D I L B U L M N R T T G
T O C E E X A X B W B A I C M Q
T I Z G D D X T U L T F I Z O B
N A U S A R T O E E Y D X W I U
G H K M B Q E A T D E T F E B S
R A I S U L Z H Q H M W C C D D
X I J V B V G R E S A L X G H F
melakukan total 26504 perbandingan huruf dan dibutuhkan 1.546000 detik
terdapat 14 kata yang ditemukan
```

Gambar 3.4 testcase4 (medium) dan outputnya pada program

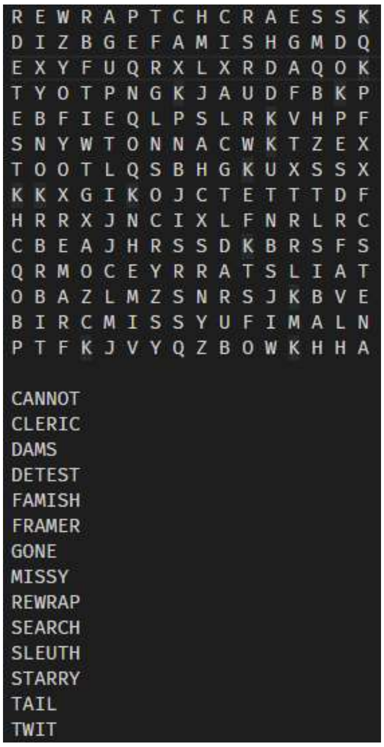


```
E T O X G E P S P J M C T P Q R
S I C K E R U D O W X P S B R Z
I O H E C H G N I V A R W W T E
I C B Q C V 0 L K H M N M D I T
I V Y A W S H Y D B U N P A Y B
W R T I C N F H X C H O M P E O
R T C M J M U N J R N P E K A S
A S C K A L Q W M T M V J L U O
J Y Q C R E E J D T T Y E P A A
I B Q E O V D W W O P S D I W P
A D S P L E Q F B R E Q U I L I
J R U S F L U N P R U X T D Q K
E G N U L P G D W I B L Y O H O
F I C V Y T R O F D D H U X U T

ATTACH
CHOMP
DUTY
FLORA
FORTY
LEVEL
PALE
PLUNGE
RAVING
SEAM
SICKER
SPECK
TORRID
VEI
```

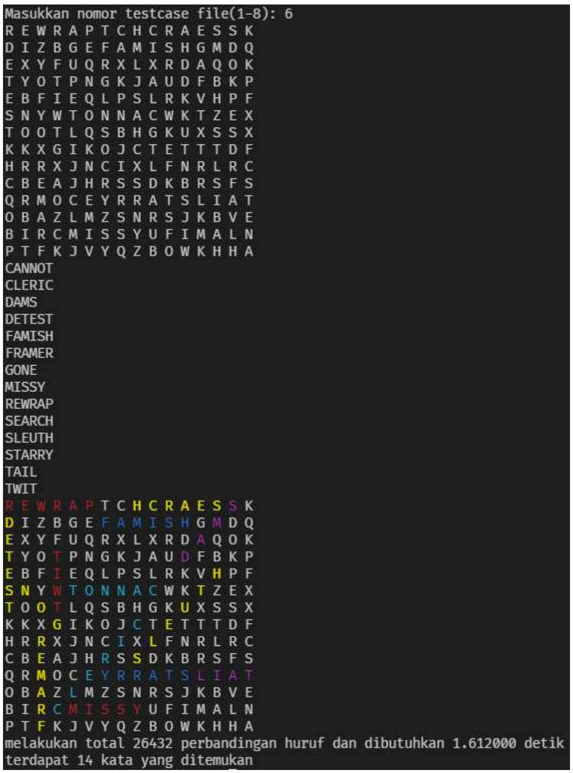


```
Masukkan nomor testcase file(1-8): 5
E T O X G E P S P J M C T P Q R
S I C K E R U D O W X P S B R Z
I O H E C H G N I V A R W W T E
I C B Q C V 0 L K H M N M D I T
I V Y A W S H Y D B U N P A Y B
W R T I C N F H X C H O M P E O
R T C M J M U N J R N P E K A S
A S C K A L Q W M T M V J L U O
J Y Q C R E E J D T T Y E P A A
I B Q E O V D W W O P S D I W P
A D S P L E Q F B R E Q U I L I
J R U S F L U N P R U X T D Q K
E G N U L P G D W I B L Y O H O
F I C V Y T R O F D D H U X U T
ATTACH
CHOMP
DUTY
FLORA
FORTY
LEVEL
PALE
PLUNGE
RAVING
SEAM
SICKER
SPECK
TORRID
VEI
E T O X G E P S P J M C T P Q R
S I C K E R U D O W X P S B R Z
I O H E C H G N I V A R W W T E
I C B Q C V 0 L K H M N M D I T
I V Y A W S H Y D B U N P A Y B
W R T I C N F H X C H O M P E O
R T C M J M U N J R N P E K A S
A S C K A L Q W M T M V J L U O
J Y Q C R E E J D T T Y E P A A
I B Q E O V D W W O P S D I W P
A D S P L E Q F B R E Q U I L I
J R U S F L U N P R U X T D Q K
E G N U L P G D W I B L Y O H O
F I C V Y T R O F D D H U X U T
melakukan total 26240 perbandingan huruf dan dibutuhkan 1.560000 detik
terdapat 15 kata yang ditemukan
```

Gambar 3.5 testcase5 (medium) dan outputnya pada program

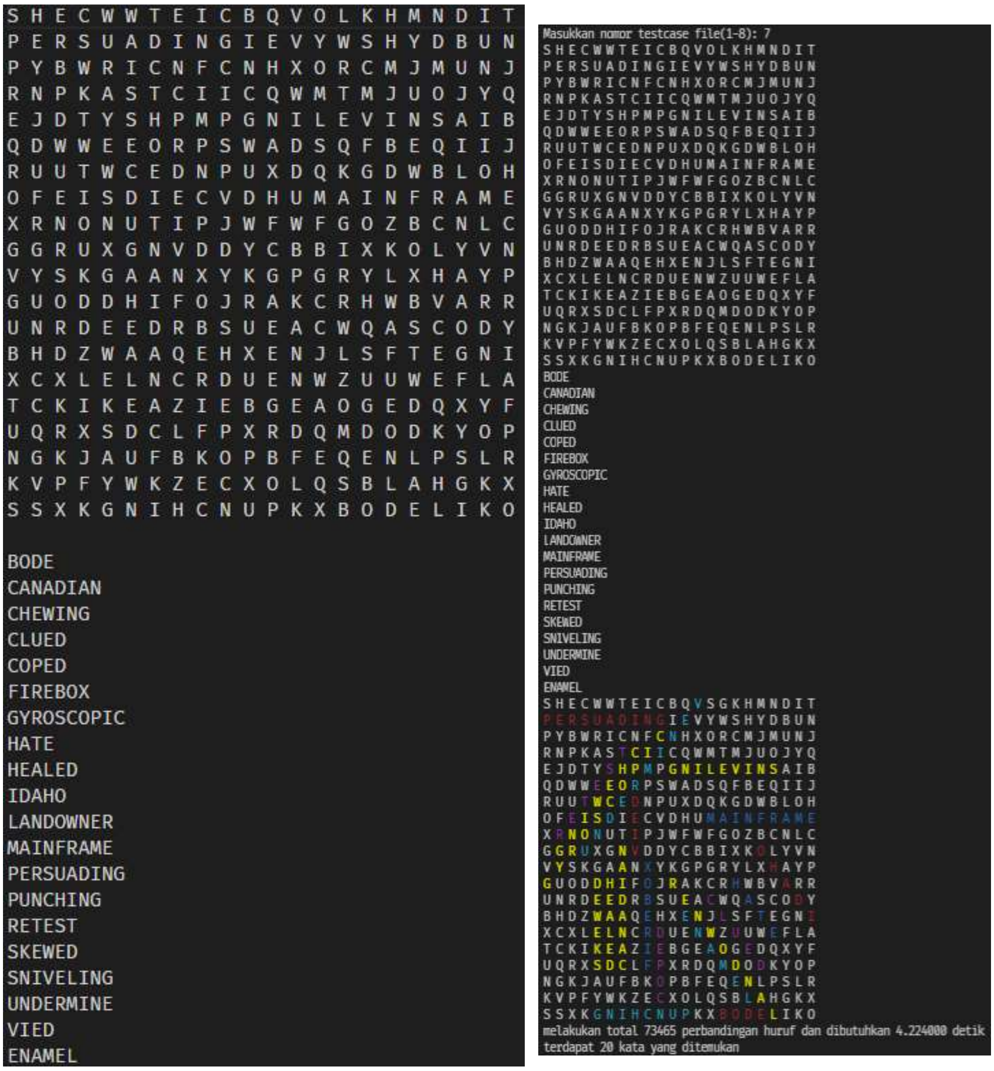


```
R E W R A P T C H C R A E S S K
D I Z B G E F A M I S H G M D Q
E X Y F U Q R X L X R D A Q O K
T Y O T P N G K J A U D F B K P
E B F I E Q L P S L R K V H P F
S N Y W T O N N A C W K T Z E X
T O O T L Q S B H G K U X S S X
K K X G I K O J C T E T T T D F
H R R X J N C I X L F N R L R C
C B E A J H R S S D K B R S F S
Q R M O C E Y R R A T S L I A T
O B A Z L M Z S N R S J K B V E
B I R C M I S S Y U F I M A L N
P T F K J V Y Q Z B O W K H H A

CANNOT
CLERIC
DAMS
DETEST
FAMISH
FRAMER
GONE
MISSY
REWRAP
SEARCH
SLEUTH
STARRY
TAIL
TWIT
```



```
Masukkan nomor testcase file(1-8): 6
R E W R A P T C H C R A E S S K
D I Z B G E F A M I S H G M D Q
E X Y F U Q R X L X R D A Q O K
T Y O T P N G K J A U D F B K P
E B F I E Q L P S L R K V H P F
S N Y W T O N N A C W K T Z E X
T O O T L Q S B H G K U X S S X
K K X G I K O J C T E T T T D F
H R R X J N C I X L F N R L R C
C B E A J H R S S D K B R S F S
Q R M O C E Y R R A T S L I A T
O B A Z L M Z S N R S J K B V E
B I R C M I S S Y U F I M A L N
P T F K J V Y Q Z B O W K H H A
CANNOT
CLERIC
DAMS
DETEST
FAMISH
FRAMER
GONE
MISSY
REWRAP
SEARCH
SLEUTH
STARRY
TAIL
TWIT
R E W R A P T C H C R A E S S K
D I Z B G E F A M I S H G M D Q
E X Y F U Q R X L X R D A Q O K
T Y O T P N G K J A U D F B K P
E B F I E Q L P S L R K V H P F
S N Y W T O N N A C W K T Z E X
T O O T L Q S B H G K U X S S X
K K X G I K O J C T E T T T D F
H R R X J N C I X L F N R L R C
C B E A J H R S S D K B R S F S
Q R M O C E Y R R A T S L I A T
O B A Z L M Z S N R S J K B V E
B I R C M I S S Y U F I M A L N
P T F K J V Y Q Z B O W K H H A
melakukan total 26432 perbandingan huruf dan dibutuhkan 1.612000 detik
terdapat 14 kata yang ditemukan
```

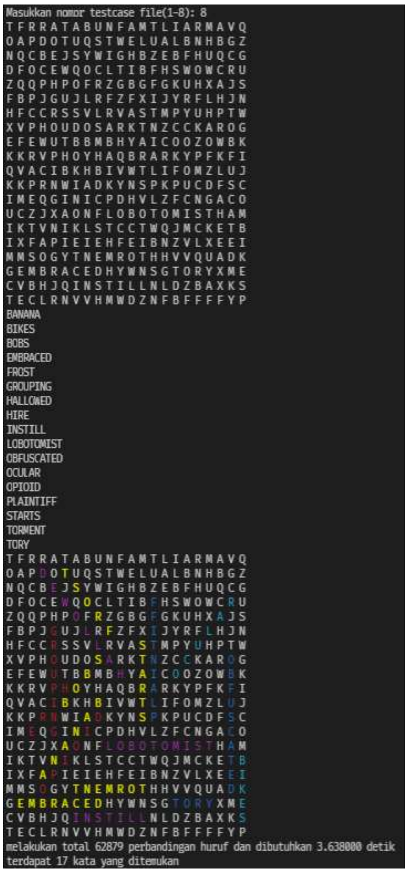
Gambar 3.6 testcase6 (medium) dan outputnya pada program



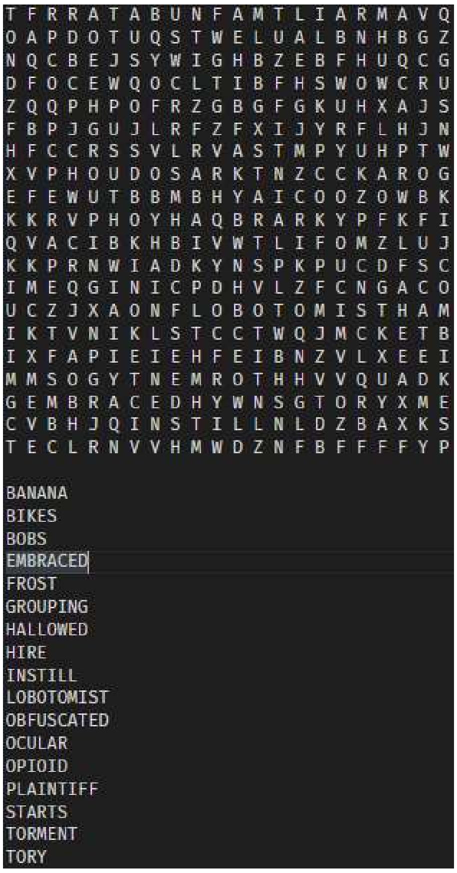
```
S H E C W W T E I C B Q V O L K H M N D I T
P E R S U A D I N G I E V Y W S H Y D B U N
P Y B W R I C N F C N H X O R C M J M U N J
R N P K A S T C I I C Q W M T M J U O J Y Q
E J D T Y S H P M P G N I L E V I N S A I B
Q D W W E E O R P S W A D S Q F B E Q I I J
R U U T W C E D N P U X D Q K G D W B L O H
O F E I S D I E C V D H U M A I N F R A M E
X R N O N U T I P J W F W F G O Z B C N L C
G G R U X G N V D D Y C B B I X K O L Y V N
V Y S K G A A N X Y K G P G R Y L X H A Y P
G U O D D H I F O J R A K C R H W B V A R R
U N R D E E D R B S U E A C W Q A S C O D Y
B H D Z W A A Q E H X E N J L S F T E G N I
X C X L E L N C R D U E N W Z U U W E F L A
T C K I K E A Z I E B G E A O G E D Q X Y F
U Q R X S D C L F P X R D Q M D O D K Y O P
N G K J A U F B K O P B F E Q E N L P S L R
K V P F Y W K Z E C X O L Q S B L A H G K X
S S X K G N I H C N U P K X B O D E L I K O

BODE
CANADIAN
CHEWING
CLUED
COPED
FIREBOX
GYROSCOPIC
HATE
HEALED
IDAHO
LANDOWNER
MAINFRAME
PERSUADING
PUNCHING
RETEST
SKEWED
SNIVELING
UNDERMINE
VIED
ENAMEL
```

```
Masukkan nomor testcase file(1-8): 7
S H E C W W T E I C B Q V O L K H M N D I T
P E R S U A D I N G I E V Y W S H Y D B U N
P Y B W R I C N F C N H X O R C M J M U N J
R N P K A S T C I I C Q W M T M J U O J Y Q
E J D T Y S H P M P G N I L E V I N S A I B
Q D W W E E O R P S W A D S Q F B E Q I I J
R U U T W C E D N P U X D Q K G D W B L O H
O F E I S D I E C V D H U M A I N F R A M E
X R N O N U T I P J W F W F G O Z B C N L C
G G R U X G N V D D Y C B B I X K O L Y V N
V Y S K G A A N X Y K G P G R Y L X H A Y P
G U O D D H I F O J R A K C R H W B V A R R
U N R D E E D R B S U E A C W Q A S C O D Y
B H D Z W A A Q E H X E N J L S F T E G N I
X C X L E L N C R D U E N W Z U U W E F L A
T C K I K E A Z I E B G E A O G E D Q X Y F
U Q R X S D C L F P X R D Q M D O D K Y O P
N G K J A U F B K O P B F E Q E N L P S L R
K V P F Y W K Z E C X O L Q S B L A H G K X
S S X K G N I H C N U P K X B O D E L I K O
BODE
CANADIAN
CHEWING
CLUED
COPED
FIREBOX
GYROSCOPIC
HATE
HEALED
IDAHO
LANDOWNER
MAINFRAME
PERSUADING
PUNCHING
RETEST
SKEWED
SNIVELING
UNDERMINE
VIED
ENAMEL
S H E C W W T E I C B Q V S G K H M N D I T
P E R S U A D I N G I E V Y W S H Y D B U N
P Y B W R I C N F C N H X O R C M J M U N J
R N P K A S T C I I C Q W M T M J U O J Y Q
E J D T Y S H P M P G N I L E V I N S A I B
Q D W W E E O R P S W A D S Q F B E Q I I J
R U U T W C E D N P U X D Q K G D W B L O H
O F E I S D I E C V D H U M A I N F R A M E
X R N O N U T I P J W F W F G O Z B C N L C
G G R U X G N V D D Y C B B I X K O L Y V N
V Y S K G A A N X Y K G P G R Y L X H A Y P
G U O D D H I F O J R A K C R H W B V A R R
U N R D E E D R B S U E A C W Q A S C O D Y
B H D Z W A A Q E H X E N J L S F T E G N I
X C X L E L N C R D U E N W Z U U W E F L A
T C K I K E A Z I E B G E A O G E D Q X Y F
U Q R X S D C L F P X R D Q M D O D K Y O P
N G K J A U F B K O P B F E Q E N L P S L R
K V P F Y W K Z E C X O L Q S B L A H G K X
S S X K G N I H C N U P K X B O D E L I K O
melakukan total 73465 perbandingan huruf dan dibutuhkan 4.224000 detik
terdapat 20 kata yang ditemukan
```

Gambar 3.7 testcase7 (Large) dan outputnya pada program



```
Masukkan nomor testcase file(1-8): 8
T F R R A T A B U N F A M T L I A R M A V Q
O A P D O T U Q S T W E L U A L B N H B G Z
N Q C B E J S Y W I G H B Z E B F H U Q C G
D F O C E W Q O C L T I B F H S W O W C R U
Z Q Q P H P O F R Z G B G F G K U H X A J S
F B P J G U J L R F Z F X I J Y R F L H J N
H F C C R S S V L R V A S T M P Y U H P T W
X V P H O U D O S A R K T N Z C C K A R O G
E F E W U T B B M B H Y A I C O O Z O W B K
K K R V P H O Y H A Q B R A R K Y P F K F I
Q V A C I B K H B I V W T L I F O M Z L U J
K K P R N W I A D K Y N S P K P U C D F S C
I M E Q G I N I C P D H V L Z F C N G A C O
U C Z J X A O N F L O B O T O M I S T H A M
I K T V N I K L S T C C T W Q J M C K E T B
I X F A P I E I E H F E I B N Z V L X E E I
M M S O G Y T N E M R O T H H V V Q U A D K
G E M B R A C E D H Y W N S G T O R Y X M E
C V B H J Q I N S T I L L N L D Z B A X K S
T E C L R N V V H M W D Z N F B F F F F Y P
BANANA
BIKES
BOBS
EMBRACED
FROST
GROUPING
HALLOWED
HIRE
INSTILL
LOBOTOMIST
OBFUSCATED
OCULAR
OPIOID
PLAINTIFF
STARTS
TORMENT
TORY
T F R R A T A B U N F A M T L I A R M A V Q
O A P D O T U Q S T W E L U A L B N H B G Z
N Q C B E J S Y W I G H B Z E B F H U Q C G
D F O C E W Q O C L T I B F H S W O W C R U
Z Q Q P H P O F R Z G B G F G K U H X A J S
F B P J G U J L R F Z F X I J Y R F L H J N
H F C C R S S V L R V A S T M P Y U H P T W
X V P H O U D O S A R K T N Z C C K A R O G
E F E W U T B B M B H Y A I C O O Z O W B K
K K R V P H O Y H A Q B R A R K Y P F K F I
Q V A C I B K H B I V W T L I F O M Z L U J
K K P R N W I A D K Y N S P K P U C D F S C
I M E Q G I N I C P D H V L Z F C N G A C O
U C Z J X A O N F L O B O T O M I S T H A M
I K T V N I K L S T C C T W Q J M C K E T B
I X F A P I E I E H F E I B N Z V L X E E I
M M S O G Y T N E M R O T H H V V Q U A D K
G E M B R A C E D H Y W N S G T O R Y X M E
C V B H J Q I N S T I L L N L D Z B A X K S
T E C L R N V V H M W D Z N F B F F F F Y P
melakukan total 62879 perbandingan huruf dan dibutuhkan 3.638000 detik
terdapat 17 kata yang ditemukan
```



```
T F R R A T A B U N F A M T L I A R M A V Q
O A P D O T U Q S T W E L U A L B N H B G Z
N Q C B E J S Y W I G H B Z E B F H U Q C G
D F O C E W Q O C L T I B F H S W O W C R U
Z Q Q P H P O F R Z G B G F G K U H X A J S
F B P J G U J L R F Z F X I J Y R F L H J N
H F C C R S S V L R V A S T M P Y U H P T W
X V P H O U D O S A R K T N Z C C K A R O G
E F E W U T B B M B H Y A I C O O Z O W B K
K K R V P H O Y H A Q B R A R K Y P F K F I
Q V A C I B K H B I V W T L I F O M Z L U J
K K P R N W I A D K Y N S P K P U C D F S C
I M E Q G I N I C P D H V L Z F C N G A C O
U C Z J X A O N F L O B O T O M I S T H A M
I K T V N I K L S T C C T W Q J M C K E T B
I X F A P I E I E H F E I B N Z V L X E E I
M M S O G Y T N E M R O T H H V V Q U A D K
G E M B R A C E D H Y W N S G T O R Y X M E
C V B H J Q I N S T I L L N L D Z B A X K S
T E C L R N V V H M W D Z N F B F F F F Y P

BANANA
BIKES
BOBS
EMBRACED
FROST
GROUPING
HALLOWED
HIRE
INSTILL
LOBOTOMIST
OBFUSCATED
OCULAR
OPIOID
PLAINTIFF
STARTS
TORMENT
TORY
```

Gambar 3.8 testcase8 (Large) dan outputnya pada program

4. Alamat drive

Link repository : https://github.com/fadilfauzani/Tucil1-IF2211

Poin	Ya	Tidak
1. Program berhasil dikompilasi tanpa kesalahan (no syntax error)	√	
2. Program berhasil *running*	√	
3. Program dapat membaca file masukkan dan menuliskan luaran.	√	
4. Program berhasil menemukan semua kata di dalam puzzle	√	