```cpp
//CODESMILE4 20311016(captain) Project-Game-Black and white
#include<iostream.h>
#include<conio.h>
#include<string.h>
#include<iomanip.h>
#include<ctype.h>
#include<fstream.h>
#include<studio.h>
#include<process.h>
#include<stdlib.h>
struct user
{
 char ch;
 int B,W;
}
void mastermind()
{
 fstream f;
 f.open("words.txt",ios::in|ios::out|ios::trunc);
 char a6[1000]={"abroad battle country domain equity famous growth
honest inquiry junior killed lesson mother notice option parent quotes
regard silent talent united vision winter yellow"};
 char a7[1000]={"absence barking chamber drought english finally
glitter hormone indians janitor kindman lazying monster naughty
october physics rampage sweater thirsty uranium"};
 char a8[1000]={"absolute bearable campaign dockyard enclosed footstep
gymnasts hardened isolated jammable knockout landmark musician
national overworn painting quotient raisings sympathy tactical
urbanise vehicles websites youthful"};
 char a9[1000]={"adversity betrayals configure devouring exploring
farmhouse goldsmith hypocrite introduce jubilant lecturing mastering
numerical published randomise symbolise uniformly voluntary wonderful
youngster"};
 char a10[1000]={"astonished boundaries charmingly determined
exhaustion formidable importance journalism longitudes magnitudes
nightmares sympathise trampoline ultrasonic vanquished worshipful"};
 randomize();
 int n=random(110);
 f<<a6<<a7<<a8<<a9<<a10;
 char temp[10];
 f.seekg(0);
 for(int i=0;i<n;i++)
 {
  f.getline(temp,11,' ');
 }
 char m[10];
 strcpy(m,temp);
 int l;
 l=strlen(m);
 user word[10];
 int y=0,w,b,k=0,t;
 float cnt=0;
 char u[10];
 cout<<"Press an other key."<<endl;
 getch();
 clrscr();
```

```cpp
 cout<<endl<<"Let us get started!The hidden word has "<<l<<" letters!"
<<endl;
 cout<<"Enter a word with :"<<l<<" letters!"<<endl;
 gets(u);
 while(k==0)
 {
  if(strlen(u)==l)
  {
   y=0;
   for(int i=0;i<strlen(u);i++)
   {
    if(isalpha(u[i]))
        y++;
   }
   if(strcmpi(u,m)==0)
   {
    k=1;
        break;
   }
   else if(y==l)
   {
    for(i=0;i<l;i++)
        {
         word[i].ch=u[i];
         word[i].B=0;
         word[i].W=0;
        }
        for(i=0;i<l;i++)
        {
         for(int j=0;j<l;j++)
         {
          if(m[i]==word[j].ch)
          {
           if(i==j)
           {
            word[j].W=1;
                word[j].B=0;
           }
           else if(word[j].W==0)
           word[j].B=1;
          }
         }
        }
        b=0;
        w=0;
        for(i=0;i<l;i++)
        {
         w=w+word[i].W;
         b=b+word[i].B;
        }
        if(b>=l/2||w>=l/2)
        cnt++;
        cout<<endl;
        cout<<endl<<"There are "<<b<<" blacks and "<<w<<" whites"
<<endl;
        cout<<endl<<"Enter the next word you are guessing"<<endl;
        gets(u);
```

```cpp
    }
    else
    {
     cout<<"Sorry you have entered a word with special characters"
<<endl
       cout<<"Enter again"<<endl;
       gets(u);
    }
   }
   else
   {
    cout<<"Sorry youhave entered a word with no. of letters not
matching with that of the hidden word"<<endl;
    cout<<"Enter again"<<endl;
    gets(u);
   }
 }
 if(k==1)
 {
  cout<<endl<<"You have arrived at the right word!"<<endl<<"The right
word is "<<m;
 }
 int x,z;
 x=cnt+1;z=1;
 if(x<=z)
 cout<<endl<<"You seem to have an iq above average,about 115-130"
<<endl;
 else if(x>z&&x<=5*z/2)
 cout<<endl<<"You seem to have an average iq between 85-115"<<endl;
 else if(x>5*z/2)
 cout<<endl<<"You seem to have an iq below average,below 85"<<endl;
 cout<<"- - - - - -- -- - -- - - - - - - - - - - - - - - - - - - - -
--- ------ ------ - - - - - -"<<endl;
 cout<<"Disclaimer::The iq we have predicted ,may not be right"<<endl;
 cout<<endl;
 cout<<"Thank you for playing our game"<<endl;
 cout<<endl;
 cout<<"-------------------------------------------------------------
---------------------------"<<endl;
}

void main()
{
 getch();
 clrscr();
 int n;
 cout<<setfill('-')<<setw(80)<<" "<<endl;
 cout<<setfill('-')<<setw(80)<<" "<<endl;
 cout<<setw(45)<<"MASTER MIND"<<endl;
 cout<<setfill('-')<<setw(80)<<" "<<endl;
 cout<<setfill('-')<<setw(80)<<" "<<endl;
 cout<<"->In this game a word in random from the dictionary is chosen.
(press any key)"<<endl;
 getch();
 cout<<endl;
 cout<<"->You are told how many letters exist in the hidden word(Press
key)"<<endl;
```

```cpp
 getch();
 cout<<endl;
 cout<<"->You enter a word with the same number of letters and try to
get the hidden word"<<endl;
 cout<<endl;
 cout<<endl;
 cout<<"Type 1 to know the game rules,type anything else if no"<<endl;
 cout<<endl;
 cout<<"------------------------------------------------------------
-------------------------"<<endl;
 char ch;
 cin>>ch;
 if(ch=='1')
 {
  cout<<"Press key"<<endl;
  getch();
  clrscr();
  cout<<endl;
  cout<<"-------------------------Rules!!!------------------------
------"<<endl
  cout<<" 1)Enter a word with only that many letters present in hidden
word"<<endl;
  cout<<" 2)Enter only words containing letters(no special
characters)"<<endl;
  cout<<" 3)Enjoy using you Brain!"<<endl;
  cout<<" At the end we would also try to approximate your iq based on
how many attempts you took to find the word"<<endl;
 }
 cout<<"Press key"
 getch();
 clrscr();
 cout<<"Do you want see reference?"<<endl;
 cout<<"Enter 1 to continue or anything else to skip"<<endl;
 cout<<"-----------------------------------------------------"<<endl;
 cin>>ch;
 if(ch=='1')
 {
  cout<<endl;
  cout<<"->For every word you enter no. of blacks and whites in that
word is shown."<<endl;
  cout<<endl;
  getch();
  cout<<"1)No. of blacks=No. of letters in ur word which exists in the
hidden word but positions of the similar letters in ur word don't
match with that of the hidden"<<endl;
  cout<<endl;
  cout<<"2)No. of whites=No. of letters in you word existing in hidden
word,and positions of similar letters are also same!"<<endl;
  cout<<endl;
  getch();
  clrscr();
  cout<<"Do you want a demo?(Type 1 if yes)"<<endl;
  cin>>ch;
 }
 if(ch=='1')
 {
  cout<<"-----------------------------------------------------"<<endl;
```

```cpp
  cout<<"For example:Let us assume hidden word to be 'Banana'"<<endl;
  cout<<endl;
  cout<<"->You enter the word taught"<<endl;
  cout<<"Now the word banana and taught have 'a' as common and
positions of a also match"<<endl;
  cout<<"thus now you have one white,zero blacks"<<endl;
  cout<<endl;
  getch();
  cout<<"->Next you enter 'leader'"<<endl;
  cout<<"Now 'a' is common but positions don't match"<<endl;
  cout<<"Thus one black,zero whites"<<endl;
  getch();
  clrscr();
  cout<<endl<<"This way you can try different combinations to find the
hidden word"<<endl;
  cout<<"-------------------------------------------------------------
------------------"<<endl;
  cout<<endl;
 }
 cout<<"Would you like to play?Enter 1"<<endl;
 cout<<endl;
 cin>>n;
 if(n==1)
 mastermind();
 else
 exit(0);
 int c;
 for(int i=5;i>0;i++)
 {
  clrscr();
  cout<<"Would you like to play again?Enter 1"<<endl;
  cin>>c;
  if(c==1)
  mastermind();
  else
  exit(0);
 }
 getch();
}
```