#include<stdio.h>

#include<stdbool.h>

#define size 3

char board[size][size];

void initializeboard(){

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

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

board[i][j]='1'+(i\*size+j);

}

}

}

void display(){

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

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

printf("%c ",board[i][j]);

if(j<size-1) printf(" | ");

}

printf("\n");

if (i < size - 1) printf("-----------\n");

}

}

bool Makemove(char player,int position){

int row=(position-1)/10;

int col=(position-1)%10;

if(board[row][col]!='X' && board[row][col]!='O'){

board[row][col]=player;

return true;

}

return false;

}

bool Checkwin(char player){

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

if(board[i][0]==player && board[i][1]==player && board[i][2]==player) return true;

if(board[0][i]==player && board[1][i]==player && board[2][i]==player) return true;

}

if(board[0][0]==player && board[1][1]==player && board[2][2]==player) return true;

if(board[0][2]==player && board[1][1]==player && board[2][0]==player) return true;

return false;

}

bool isBoardfull(){

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

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

if(board[i][j]!='X' && board[i][j]!='O') return false;

}

}

return true;

}

int main(){

char player='X';

int position;

initializeboard();

while(true){

display();

printf("Player %c position(1-9):",player);

scanf("%d",&position);

if(position<1 || position>9 || !Makemove(player,position)){

printf("Invalid move");

continue;

}

if(Checkwin(player)){

display();

printf("Congratulations..!!\nPlayer %c Wins\nYennaikum VidaaMuyarchi\n",player);

break;

}

if(isBoardfull()){

display();

printf("Good Match ends in a Draw\n");

break;

}

player=(player=='X')?'O':'X';

}

return 0;

}