**TURTLE GRAPHICS**

**CODE:**

#include <stdio.h>

void display(int);

int floor[50][50] = { 0 };

int main()

{

int x = 0, y = 0, k;

int command;

int turtle = 2; int pen=1;

int steps = 0;

printf("\n\n\n\t\t\t\t\t\x1b[32mWELCOME TO \x1b[1mTURTLE GAME!\n\n\x1b[2mPress any key to start playing...\x1b[0m");

//\xlb[32m is the escape sequence for green colored text, \x1b[1m for brightening the font color

getchar();

printf("\n\nList of commands: \n");

printf("1-PENUP \n");

printf("2-PENDOWN\n");

printf("3-TURNRIGHT\n");

printf("4-TURNLEFT\n");

printf("5-GO\n");

printf("6-PRINT\n");

printf("7-RESET FLOOR\n");

printf("9-EXIT\n");

while (1)

{

scanf\_s("%d", &command);

if (command == 9) {

break;

}

switch (command)

{

case 1:

pen = 1;

break;

case 2:

pen = 2;

break;

case 3:

if (turtle == 4) { turtle = 1; }

else { turtle++; } break;

case 4:

if (turtle == 1) { turtle = 4; }

else { turtle--; }

break;

case 5:

printf("How many steps? \n");

scanf\_s("%d", &steps);

switch (pen)

{

case 1:

switch (turtle)

{

case 1:

x -= steps;

break;

case 2:

y += steps;

break;

case 3:

x += steps;

break;

case 4:

y -= steps;

break;

}

break;

case 2:

switch (turtle)

{

case 1:

for (k = 0; k < steps; k++)

{

x--;

floor[x][y] = 1;

}

break;

case 2:

for (k = 0; k < steps; k++)

{

y++;

floor[x][y] = 1;

}

break;

case 3:

for (k = 0; k < steps; k++)

{

x++;

floor[x][y] = 1;

}

break;

case 4:

for (k = 0; k < steps; k++)

{

y--;

floor[x][y] = 1;

}

break;

}

break;

}

break;

case 6:

display(1);

break;

}

}

return 0;

}

void display(int x)

{

for (int i = 0; i < 50; i++)

{

for (int j = 0; j < 50; j++)

{

if (floor[i][j] == 0) {

printf(" ");

}

else printf("\x1b[33m\* \x1b[0m");

}

printf("\n");

}

}

**OUTPUT:**

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