|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Main-שתי ריצות של ספרה 1 במחרוזת | | | | | | | | | | | | | | | | | | | | | | | | | | |
| p | q | r | | | i | | k | | ps[] | | qs[] | | | rs[] | s[] | Visit[10] | | | | | | | | | |
| 2 | 1 |  | | |  | |  | |  | |  | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 2 | | |  | |  | |  | |  | | |  |  |  |  |  |  |  |  |  |  |  |  |
| int\_to\_str(r,rs) | | | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |
| n | | | | s | | | | | | i | | | | | |  |  |  |  |  |  |  |  |  |  |
| 2 | | | |  | | | | | |  | | | | | |  |  |  |  |  |  |  |  |  |  |
|  | | | |  | | | | | | 0 | | | | | |  |  |  |  |  |  |  |  |  |  |
|  | | | | ‘2’ | | | | | | 1 | | | | | |  |  |  |  |  |  |  |  |  |  |
| 0 | | | |  | | | | | |  | | | | | |  |  |  |  |  |  |  |  |  |  |
|  | | | | ‘2\0’ | | | | | |  | | | | | |  |  |  |  |  |  |  |  |  |  |
| Reverse(s) | | | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |
| s | | | i | | | | | j | | | | | t | | |  |  |  |  |  |  |  |  |  |  |
| ‘2’ | | | 0 | | | | | 1 | | | | |  | | |  |  |  |  |  |  |  |  |  |  |
| ‘\0’ | | |  | | | | |  | | | | | ‘2’ | | |  |  |  |  |  |  |  |  |  |  |
| ‘2 | | |  | | | | |  | | | | |  | | |  |  |  |  |  |  |  |  |  |  |
| main | | | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |
| p | q | r | | | i | | k | | ps[] | | qs[] | | | rs[] | s[] |  |  |  |  |  |  |  |  |  |  |
|  | 2 |  | | |  | |  | |  | |  | | | ‘2’ |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 4 | | |  | |  | |  | |  | | |  |  |  |  |  |  |  |  |  |  |  |  |
| int\_to\_str(r,rs) | | | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |
| n | | | | | | s | | | | | | i | | | |  |  |  |  |  |  |  |  |  |  |
| 4 | | | | | |  | | | | | | 0 | | | |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | ‘4’ | | | | | | 1 | | | |  |  |  |  |  |  |  |  |  |  |
| Reverse(s) | | | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |
| s | | | i | | | | | j | | | | | t | | |  |  |  |  |  |  |  |  |  |  |
| ‘4’ | | | 0 | | | | | 1 | | | | |  | | |  |  |  |  |  |  |  |  |  |  |
| ‘\0’ | | |  | | | | |  | | | | | ‘4’ | | |  |  |  |  |  |  |  |  |  |  |
| ‘4’ | | |  | | | | |  | | | | |  | | |  |  |  |  |  |  |  |  |  |  |
| main | | | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |
| p | q | r | | | i | | k | | ps[] | | qs[] | | | rs[] | s[] |  |  |  |  |  |  |  |  |  |  |
|  |  |  | | |  | |  | |  | |  | | | ‘4’ |  |  |  |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Main-שתי ריצות של 2 ספרות במחרוזת | | | | | | | | | | | | | | | | | | | | | | | | | | |
| p | q | r | | | i | | k | | ps[] | | qs[] | | | rs[] | s[] | Visit[10] | | | | | | | | | |
| 2 | 5 |  | | |  | |  | |  | |  | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 10 | | |  | |  | |  | |  | | |  |  |  |  |  |  |  |  |  |  |  |  |
| int\_to\_str(r,rs) | | | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |
| n | | | | s | | | | | | i | | | | | |  |  |  |  |  |  |  |  |  |  |
| 10 | | | |  | | | | | | 0 | | | | | |  |  |  |  |  |  |  |  |  |  |
|  | | | | ‘0’ | | | | | | 1 | | | | | |  |  |  |  |  |  |  |  |  |  |
| 0 | | | |  | | | | | |  | | | | | |  |  |  |  |  |  |  |  |  |  |
|  | | | | ‘01’ | | | | | | 2 | | | | | |  |  |  |  |  |  |  |  |  |  |
| Reverse(s) | | | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |
| s | | | i | | | | | j | | | | | t | | |  |  |  |  |  |  |  |  |  |  |
| ‘01’ | | | 0 | | | | | 1 | | | | |  | | |  |  |  |  |  |  |  |  |  |  |
|  | | |  | | | | |  | | | | | ‘0’ | | |  |  |  |  |  |  |  |  |  |  |
| ‘1’ | | |  | | | | |  | | | | |  | | |  |  |  |  |  |  |  |  |  |  |
| ‘10’ | | |  | | | | |  | | | | |  | | |  |  |  |  |  |  |  |  |  |  |
| main | | | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |
| p | q | r | | | i | | k | | ps[] | | qs[] | | | rs[] | s[] |  |  |  |  |  |  |  |  |  |  |
|  | 6 |  | | |  | |  | |  | |  | | | ‘10’ |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | | |  | |  | |  | |  | | |  |  |  |  |  |  |  |  |  |  |  |  |
| int\_to\_str(r,rs) | | | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |
| n | | | | | | s | | | | | | i | | | |  |  |  |  |  |  |  |  |  |  |
| 12 | | | | | |  | | | | | | 0 | | | |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | ‘2’ | | | | | | 1 | | | |  |  |  |  |  |  |  |  |  |  |
| 1 | | | | | |  | | | | | |  | | | |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | ‘21’ | | | | | | 2 | | | |  |  |  |  |  |  |  |  |  |  |
| Reverse(s) | | | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |
| s | | | i | | | | | j | | | | | t | | |  |  |  |  |  |  |  |  |  |  |
| ‘21’ | | | 0 | | | | | 1 | | | | |  | | |  |  |  |  |  |  |  |  |  |  |
|  | | |  | | | | |  | | | | | ‘2’ | | |  |  |  |  |  |  |  |  |  |  |
| ‘1’ | | |  | | | | |  | | | | |  | | |  |  |  |  |  |  |  |  |  |  |
| ‘12’ | | |  | | | | |  | | | | |  | | |  |  |  |  |  |  |  |  |  |  |
| main | | | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |
| p | q | r | | | i | | k | | ps[] | | qs[] | | | rs[] | s[] |  |  |  |  |  |  |  |  |  |  |
|  | 7 |  | | |  | |  | |  | |  | | | ‘12’ |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | | |  | |  | |  | |  | | |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Main-ריצה של 3 ספרות במחרוזת | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| p | q | r | | | | i | | k | | ps[] | | qs[] | | | | | rs[] | s[] | Visit[10] | | | | | | | | | |
| 2 | 50 |  | | | |  | |  | |  | |  | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 100 | | | |  | |  | |  | |  | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
| int\_to\_str(r,rs) | | | | | | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |
| n | | | | | s | | | | | | i | | | | | | | |  |  |  |  |  |  |  |  |  |  |
| 100 | | | | |  | | | | | | 0 | | | | | | | |  |  |  |  |  |  |  |  |  |  |
|  | | | | | ‘0’ | | | | | | 1 | | | | | | | |  |  |  |  |  |  |  |  |  |  |
| 10 | | | | |  | | | | | |  | | | | | | | |  |  |  |  |  |  |  |  |  |  |
|  | | | | | ‘00’ | | | | | | 2 | | | | | | | |  |  |  |  |  |  |  |  |  |  |
| 1 | | | | |  | | | | | |  | | | | | | | |  |  |  |  |  |  |  |  |  |  |
|  | | | | | ‘001’ | | | | | | 3 | | | | | | | |  |  |  |  |  |  |  |  |  |  |
| Reverse(s) | | | | | | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |
| s | | | i | | | | | | j | | | | | | t | | | |  |  |  |  |  |  |  |  |  |  |
| ‘001’ | | | 0 | | | | | | 2 | | | | | |  | | | |  |  |  |  |  |  |  |  |  |  |
|  | | |  | | | | | |  | | | | | | ‘0’ | | | |  |  |  |  |  |  |  |  |  |  |
| ‘101’ | | |  | | | | | |  | | | | | |  | | | |  |  |  |  |  |  |  |  |  |  |
| ‘100’ | | |  | | | | | |  | | | | | |  | | | |  |  |  |  |  |  |  |  |  |  |
|  | | | 1 | | | | | | 1 | | | | | |  | | | |  |  |  |  |  |  |  |  |  |  |
| main | | | | | | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |
| p | q | r | | | | i | | k | | ps[] | | qs[] | | | | | rs[] | s[] |  |  |  |  |  |  |  |  |  |  |
|  | 50 |  | | | |  | |  | |  | |  | | | | | ‘100’ |  |  |  |  |  |  |  |  |  |  |  |
| int\_to\_str(p,ps) | | | | | | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |
| n | | | | | | | s | | | | | | i | | | | | |  |  |  |  |  |  |  |  |  |  |
| 2 | | | | | | |  | | | | | | 0 | | | | | |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | ‘2’ | | | | | |  | | | | | |  |  |  |  |  |  |  |  |  |  |
| Reverse(s) | | | | | | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |
| s | | | i | | | | | | j | | | | | | t | | | |  |  |  |  |  |  |  |  |  |  |
| ‘2’ | | | 0 | | | | | | 0 | | | | | |  | | | |  |  |  |  |  |  |  |  |  |  |
| main | | | | | | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |
| p | q | r | | | | i | | k | | ps[] | | qs[] | | | | | rs[] | s[] |  |  |  |  |  |  |  |  |  |  |
|  | 50 |  | | | |  | |  | | ‘2’ | |  | | | | | ‘100’ |  |  |  |  |  |  |  |  |  |  |  |
| int\_to\_str(q,qs) | | | | | | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |
| n | | | | | | | s | | | | | | | i | | | | |  |  |  |  |  |  |  |  |  |  |
| 50 | | | | | | |  | | | | | | | 0 | | | | |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | ‘0’ | | | | | | | 1 | | | | |  |  |  |  |  |  |  |  |  |  |
| 5 | | | | | | |  | | | | | | |  | | | | |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | ‘05’ | | | | | | | 2 | | | | |  |  |  |  |  |  |  |  |  |  |
| Reverse(s) | | | | | | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |
| s | | | | i | | | | | | j | | | | | | t | | |  |  |  |  |  |  |  |  |  |  |
| ‘05’ | | | | 0 | | | | | | 1 | | | | | |  | | |  |  |  |  |  |  |  |  |  |  |
|  | | | |  | | | | | |  | | | | | | ‘0’ | | |  |  |  |  |  |  |  |  |  |  |
| ‘55’ | | | |  | | | | | |  | | | | | |  | | |  |  |  |  |  |  |  |  |  |  |
| ‘50’ | | | |  | | | | | |  | | | | | |  | | |  |  |  |  |  |  |  |  |  |  |
| main | | | | | | | | | | | | | | | | | | |  |  |  |  |  |  |  |  |  |  |
| p | q | r | | | | i | | k | | ps[] | | qs[] | | | | | rs[] | s[] |  |  |  |  |  |  |  |  |  |  |
|  |  |  | | | |  | |  | | ‘2’ | | ‘50’ | | | | | ‘100’ | ‘’ |  |  |  |  |  |  |  |  |  |  |
|  |  |  | | | |  | |  | |  | |  | | | | |  | ‘2’ |  |  |  |  |  |  |  |  |  |  |
|  |  |  | | | |  | |  | |  | |  | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | | | |  | |  | |  | |  | | | | |  | ‘251’ |  |  |  |  |  |  |  |  |  |  |
|  |  |  | | | |  | |  | |  | |  | | | | |  | ‘250100’ |  |  |  |  |  |  |  |  |  |  |
| for(i = 0; i < 10; i++)מילוי המערך באפסים  visit[i] = 0; | | | | | | | | | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| p | q | r | | | | i | | k | | ps[] | | qs[] | | | | | rs[] | s[] |  |  |  |  |  |  |  |  |  |  |
|  |  |  | | | | 10 | |  | | ‘2’ | | ‘51’ | | | | | ‘100’ | ‘250100’ |  |  |  |  |  |  |  |  |  |  |
|  |  |  | | | | 0 | |  | |  | |  | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | | | |  | | 2 | |  | |  | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | | | |  | |  | |  | |  | | | | |  |  | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  |  |  | | | | 1 | |  | |  | |  | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | | | |  | | 5 | |  | |  | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | | | |  | |  | |  | |  | | | | |  |  | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
|  |  |  | | | | 2 | |  | |  | |  | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | | | |  | | 0 | |  | |  | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | | | |  | |  | |  | |  | | | | |  |  | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
|  |  |  | | | | 3 | |  | |  | |  | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | | | |  | | 1 | |  | |  | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | | | | 4 | |  | |  | |  | | | | |  |  | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
|  |  |  | | | |  | | 0 | |  | |  | | | | |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  | | | |  | |  | |  | |  | | | | |  |  |  |  |  |  |  |  |  |  |  |  |

הקוד רץ על כל המספרים מ1-98 ומדפיס את כל פעולות הכפל ב2 אשר בתרגיל אל יהיו מספרים שיחזרו על עצמם

לדוגמא בתרגיל2x50=100 התרגיל לא יודפס מכיוון שהספרה 0 מופיע יותר מפעם אחת

שתי הדפסות שכן יקרו הן

2 \* 53 = 106

2 \* 54 = 108

void reverse(char s[])//function which revers the string that comes from the function int\_to\_str

{

int i, j;

char t;

for (i = 0, j = strlen(s) - 1; i < j; i++, j--)

{

t = s[i];

s[i] = s[j];

s[j] = t;

}

}

void int\_to\_str(int n, char \*s)//function that change a number to string flipped example: 21='12'

{

int i;

if (n >= 0)

{

i = 0;

do {

s[i++] = n % 10 + '0';

} while ((n /= 10) > 0);

s[i] = '\0';

reverse(s);

}

}

int main()

{

int p, q, visit[10];

int r;

int i, k;

char ps[2], qs[3], rs[4], s[10];

p = 2;

for (q = 50; q <= 98; q++)

{

r = p\*q;

int\_to\_str(r, rs);

if (strlen(rs) == 3)

{

int\_to\_str(p, ps);

int\_to\_str(q, qs);

s[0] = '\0';

strcat(s, ps);

strcat(s, qs);

strcat(s, rs);

for (i = 0; i < 10; i++)//puts zeros in the array

visit[i] = 0;

for (i = 0; i < strlen(s); i++)

{

k = s[i] - '0';//put the char from s into k as an int

if (visit[k])//check if visit[k]=1 to check if the number repeat itself

break;

else

visit[k] = 1;//if its zero puts 1

}

if (i == strlen(s))

printf("%d \* %d = %d\n", p, q, r);

}

}

return;

}