Euler's Method

$$X_{n\{i+1\}} = X_{n\{i\}} + X_{n+1}\,\Delta t$$

calculation table:

index	time	x_1	x_2	x_3	...	x_n	f(...)
$i-1$	$t-\Delta t$	...	...	...	...	...	...
i	t	#	#	#	...	#	calculate 1st f(...)
$i+1$	$t+\Delta t$	...	now this	then this	...	then 2nd	

$X_{n\{i+1\}} = X_{n\{i\}} + f(\ldots)\,\Delta t$

$X_{3\{i+1\}} = X_{3\{i\}} + X_4\,\Delta t$

$X_{2\{i+1\}} = X_{2\{i\}} + X_3\,\Delta t$

Explicit/Symplectic methods:

index	X_1	X_2	X_3
i	#	#	$X_{3\{i\}}$
$i+1$		$X_{2\{i+1\}}$	$X_{3\{i+1\}}$

Euler Explicit Method

$$X_{2\{i+1\}} = X_{2\{i\}} + X_{3\{i\}}\,\Delta t$$

Euler Symplectic Method

$$X_{2\{i+1\}} = X_{2\{i\}} + X_{3\{i+1\}}\,\Delta t$$