List at least 5 differences between compilers and interpreters

|  |  |  |
| --- | --- | --- |
| Compilers | Interpreters |  |
| 1. Translates program one statement at a time. 2. It takes less amount of time to analyze the source code but the overall execution time is slower. 3. No intermediate object code is generated, hence are memory efficient. 4. Continues translating the program until the first error is met, in which case it stops. Hence debugging is easy. 5. Programming languages like Python, Ruby use interpreters. | 1. Scans the entire program and translates it as a whole into machine code. 2. It takes a large amount of time to analyze the source code but the overall execution time is comparatively faster. 3. Generates intermediate object code which further requires linking, hence requires more memory. 4. It generates the error message only after scanning the whole program. Hence debugging is comparatively hard. 5. Programming languages like C, C++, Java use compilers. |  |
|  |  |  |