

ECMA/TC38-TG3/2015/026 (Rev. 1 – 15 April 2015)

### Annex B2 - Product environmental attributes **Desktop/All-in-One Computers**

The declaration may be published only when all rows and/or fields marked with \* are filled-in (n.a. for not applicable). Additional information regarding each item may be found under P15.

Brand *	ideacentre	Logo				
Company name *	Lenovo					
Contact information *	Lenovo Global Environmental Affairs		Lenovo			
e-mail address Alvin L Carter			LEIIOVO			
	alcarter@lenovo.com					
Internet site *	http://www.lenovo.com/social_responsibility/us/en/environment	.html				
Additional information	The latest version of this document can be found at:					
	http://www.lenovo.com/ecodeclaration					

The company declares (based on product specification or test results based obtained from sample testing), that the product conforms to the statements given in this declaration.					
Type of product *	Desktop				
Commercial name *	Lenovo V330-20 AIO				
Model number *	10UK, 10UL				
Issue date *	2018.5.2				
Intended market *	🔀 Global 📃 Europe 📃 Asia, Pacific & Japan 📃 Americas 📃 Other				
Additional information	ENERGY STAR®, Low Blue Light;TCO				

This is an uncontrolled copy when in printed form. Please refer to the contact information for the latest version.

#### About Annex B2

Annex B2 reflects Product environmental attributes relevant for Computers and Computer Monitors. The following items from the ECMA-370 Main body are not shown in the template: P4.1 – P4.3 Consumable materials

P9.1 TEC and Print speed

P10.2 - P10.3 Chemical emissions from printing products P11.1 - P11.3 Consumable materials for printing products

Model number *		10UK, 10UL Logo						
lssue da	ite *	2018.5.2	Len	OVC	Эт			
Produc	t environ	mental attributes - Legal requirements	Require		t met			
Item			Yes	No	n.a.			
P1		ous substances and preparations						
P1.1*		s do comply with current European RoHS Directive. (See legal reference and NOTE B1)	$\square$					
P1.2*	Comme	s do not contain Asbestos (see legal reference). nt: Legal reference has no maximum concentration value.						
P1.3*	hydrobro trichloro	Products do not contain Ozone Depleting Substances: Chlorofluorocarbons (CFC), hydrobromofluorocarbons (HBFC), hydrochlorofluorcarbons (HCFC), Halons, carbontetrachloride, 1,1,1- richloroethane, methyl bromide (see legal reference). Comment: Legal reference has no maximum concentration values.						
P1.4*	terpheny	Products do not contain more than; 0,005% polychlorinated biphenyl (PCB), 0,005% polychlorinated terphenyl (PCT) in preparations (see legal reference).						
P1.5*	Products chain co	Products do not contain more than 0,1% short chain chloroparaffins (SCCP) with 10-13 carbon atoms in the chain containing at least 48% per mass of chlorine in the SCCP (see legal reference).						
P1.6*	Parts wi (see leg Comme	ek 🔀						
P1.7*	REACH	nt: Max limit in legal reference when tested according to EN1811:2011-5. Article 33 information about substances in articles is available at (add URL or mail contact): ww.lenovo.com/social_responsibility/us/en/environment.html	$\boxtimes$					
P2	Batterie	S						
P2.1*		oduct contains a battery or an accumulator, the battery/accumulator is labeled with the disposal Information on proper disposal is provided in user manual. (See legal reference)	$\boxtimes$					
P2.2*		s or accumulators do not contain more than 0,0005% of mercury or 0,002% of cadmium. (See leg	gal 🔀					
P2.3*	Batteries	s and accumulators are readily removable. (See legal reference)	$\square$					
P3	Conform	nity verification & Eco design (ErP)						
P3.1*	The pro	duct is CE-marked to show conformance with applicable legal requirements (see legal reference)	).					
P3.2*	The pro	duct complies with the Eco design requirements for energy-related products, al reference).	$\square$					
	Require	d information is; given in item P15 or added to this document, available at (add URL):	$\square$					
P5	Product	t packaging						
P5.1*	Packagi	ng and packaging components do not contain more than 0,01% lead, mercury, cadmium ent chromium by weight of these together.	and 🔀					
P5.2*	The pac	kaging materials are marked with abbreviations and numbers indicating the nature of the materia be legal reference).	al(s) 🔀					
P5.3*	The pro Protocol	duct packaging material is free from ozone depleting substances as specified in the Mont I (see legal reference). nt: Legal reference has no maximum concentration values.	real 🔀					
P6		ent information						

NOTE B1 Restriction applies to the homogeneous material, unless other specified and expressed in weight %. Stating "Yes" means that the product is compliant with the mandatory requirements.

Model number *		10UK, 10UL	Logo			
Issue dat	te *	2018.5.2		Len	ovo	ти
Product	environ	mental attributes - Market requirements (See General NOTE GN	below)			
		onmental conscious design		Require	ment r	net
Item		tory to fill in. Additional information regarding each item may be found under P14.		Yes	No	n.a.
P7		Disassembly, recycling				
P7.1*		t have to be treated separately are easily separable			<u> </u>	<u> </u>
P7.2*		aterials in covers/housing have no surface coating.			Ц_	Ц_
P7.3*	-	arts > 100 g consist of one material or of easily separable materials.				
P7.4*	•	arts > 25 g have material codes according to ISO 11469 referring ISO 1043-4.				
P7.5	Plastic parts are free from metal inlays or have inlays that can be removed with commonly available tools. Labels are easily separable. (This requirement does not apply to safety/regulatory labels).					
P7.6*						
	Product					
P7.7*	Upgradin	g can be done e.g. with processor, memory, cards or drives		$\square$		
P7.8*	Upgradin	g can be done using commonly available tools		$\boxtimes$		
P7.9	Spare parts are available after end of production for: 5 years					
P7.10	Service i	s available after end of production for: 5 years				
	Material	and substance requirements				
P7.11*	Product	cover/housing material type (e.g. plastics, metal, aluminum):				
		type: ABS PCR65%+ABS				
P7.12	Insulation materials of external electrical cables are PVC free.					
P7.13	Insulation materials of internal electrical cables are PVC free.					
P7.14		plastic casing/cover parts > 25 g contain no more than 0,1% weight (1000 ppm) b 1000 ppm) chlorine attributable to brominated flame retardants, chlorinated flame				
	containin	chloride or 0,3% weight (3000 ppm) bromine and 0,3% weight (3000 ppm) g more than 25% post-consumer recycled content.				
P7.15		circuit boards, PCBs (without components) are low halogen: all 🔀 PCBs > as defined in IEC 61249-2-21. (See 1NOTE B2)	25 g 🗌 are lo	w	$\square$	
P7.16	Marking:					$\square$
P7.17		nemical specifications of flame retardants in printed circuit boards > 25 g (without co A (additive), TBBPA (reactive) (See NOTE B3), Other: , CAS #: 26265	• •	$\boxtimes$		
	<u>Alt. 2: </u> Ch	nemical specifications of flame retardants in printed circuit boards (without compone	ents) > 25 g			
	according	g ISO 1043-4: Brominated Epoxy Resin See P15	, -	$\boxtimes$		
P7.18		ame retarded plastic parts > 25 g contain the following flame retardant substance	s/preparations	in	_	
		ations above 0,1%:				$\boxtimes$
		cal name: , CAS #: (See NOTE B4) cal name: , CAS #: "				
		cal name: , CAS #:				
		nemical specifications of flame retardants in plastic parts > 25 g according ISO 104	3_1.			
P7.19		parts > 25 g, flame retardant substances/preparations above 0,1% are used which			╞	
1 7.10		the following Risk phrases; and Hazard statements:				
	•		See note B5)			
P7.20*		sumer recycled plastic material content is used in the product (See Note B6):		$\square$		
		t least one of the two alternatives below shall be answered;				
		otal plastic parts' weight > 25 g, the postconsumer recycled plastic material conten ercentage of total plastic by weight) is <b>1.9%</b> .	it (calculated as	1		
	or	soonage of total placie by worght to 1.070.				
		weight of recycled material is 35 g.				

GENERAL NOTE Standard references should direct to the latest version of a standard. If an older version of a standard is used, section P15 shall be used for explanation.

NOTE B2 IEC 61249-2-21 defines maximum limits of 900 ppm for each of the substances chlorine and bromine and a maximum limit of 1500ppm of these substances combined. The standard does not address fluorine, iodine and astatine which are included in the group of halogens.

NOTE B3 and B4 A Guidance document on Chemical substances is available; see <a href="http://www.ecma-international.org/publications/standards/Ecma-370.htm">http://www.ecma-international.org/publications/standards/Ecma-370.htm</a>

NOTE B5 If a certain substance has been assigned a certain risk phrases / hazard statement in the referenced source, this does not necessarily mean the substance has been tested for all of the hazards referred to by a certain customer.

NOTE B6 Applies to a product containing plastic parts whose combined weight exceeds 100 g with the exception of printed circuit boards, cables, connectors and electronic components and bio-based plastic material.

Model number *	10UK, 10	DUL			Logo		
Issue date *	2018.5.2					Leno	
Product environ	nental at	tributes - Market r	equirements (cont	inued)		Require	ment met
Item			-   (				No n.a.
Materia	and subs	tance requirements	(continued)				
P7.21* Biobase	d plastic m	aterial content is used	d in the product (See N es below shall be answ				
a) Of	total plasti		, the biobased plastic	material content (calcu	ulated as a percen	itage	
P7.22* Light sou	urces are f		less than 0,1 mg/lamp				
P8 Batterie		specify: Number of lar	nps: and maxim	num mercury content pe	er lamp: mg		
	-	omposition: <i>Lithium I</i>	Manganese Dioxide				
		tion (See NOTE B8)					
			s or energy consumpti	ons are reported:			
Energy mode *		Power level at 100 V AC	Power level at 115 V AC	Power level at 230 V AC	Reference/Stan modes and test		rgy
Peak (On-max)		W	W	W	Full load		
CategoryI2							
Short Idle State - W Enabled	/OL	23.784 W	23.544 W	24.144 W	Use for ENERG registration (P <sub>i</sub>		
Long Idle State - W Enabled	OL	13.464 W	13.344 W	13.824 W	Use for ENERG registration (Pi		
Sleep (S3) - WOL E	nabled	1.38 W	1.38 W	1.404 W	Use for ENERG registration(Psi		
Sleep (S3) - WOL D	isabled	W	W	W	Reference		
Off (S5) - WOL Ena	bled	0.864 W	0.864 W	0.864 W	Use for ENERG registration(Po		
Off (S5) - WOL Disa	abled	W	W	W	Use for ErP		
CategoryI3							
Short Idle State - W Enabled	<i>'OL</i>	23.940 W	23.616 W	24.432 W	Use for ENERG registration (P <sub>i</sub>		
Long Idle State - W Enabled	OL	15.816 W	15.660 W	15.984 W	Use for ENERG registration (P <sub>i</sub>		
Sleep (S3) - WOL E	nabled	1.38 W	1.38 W	1.404 W	Use for ENERG registration(Ps		
Sleep (S3) - WOL D	isabled	W	W	W	Reference		
Off (S5) - WOL Ena	bled	0.864 W	0.864 W	0.864 W	Use for ENERG registration(Po		
Off (S5) - WOL Disa	abled	W	W	W	Use for ErP		
EPS No-load (External power supply / charger wall outlet but disconnected from	r plugged in the the product.)	W	W	W			
PTEC * Typical Energy Cons	umption	W	W	W			$\square$
ETEC * Annual Energy Cons		<i>12:94.62</i> kWh/year <i>13:98.19</i> kWh/year	12:93.73 kWh/year 13:96.99 kWh/year	12:96.21 kWh/year 13:99.93 kWh/year	$E_{TEC} = (8760/10)$ + $P_{sleep} \times 0.05$ + $P_{short_ldle} \times 0.35$	Plong_Idle x 0.15	5+
Future Di C	- h - <b>F</b> (f) - i	Poff: Off Mode(S	S5) - WOL Enabled; P <sub>slee</sub>	p: Sleep Mode(S3) - WOL			abled
	-		I Efficiency Marking Pr				<u> </u>
Display resolution * Default time to enter	-	apixels ve mode: <b>25</b> minutes					
		he energy save functi				$\square$	

NOTE B7 The following is to be excluded from the calculation of percentage: printed circuit boards, labels, cables, connectors and electronic components and postconsumer recycled plastic

NOTE B8 A Guidance document on Energy Efficiency is available; see <a href="http://www.ecma-international.org/publications/standards/Ecma-370.htm">http://www.ecma-international.org/publications/standards/Ecma-370.htm</a>

NOTE B9 A Guidance document on Acoustic Noise is available; see <u>http://www.ecma-international.org/publications/standards/Ecma-370.htm</u>

P9.3	Energy efficienc	cy class (monitors only):			
P10	Emissions		· · · · · · · · · · · · · · · · · · ·		
	Noise emission	n – Declared according to ISO 9296 (See NOTE E	39)		
P10.1	Mode	Mode description	Statistical upper limit A-wei	ighted sound power level, $L_{WA,c}$ (B)	
	Idle	* HDD:Idle	* 3.3		
	Operation	* HDD: Operating	* 3.3		
	Other mode	Declared A-weighted sound pressure level (dB) $L_{\rm pAm}$	23 (operator position desk	top – idle)	
	Other mode	Declared A-weighted sound pressure level (dB) $L_{pAm}$	25 (operator position desk	top – operating)	
	Measured accor	Measured according to: 🔀 ISO 7779 📃 ECMA-74			
		Other (only if not covered by E	CMA-74)		

Model nu	mber *	10UK, 10UL				Logo	Long		
Issue dat	е*	2018.5.2					Lenc		тм
Product	environr	nental attributes	- Market requiren	nents (co	ntinued)		Require	ment	met
Item							Yes	No	n.a.
	Electror	nagnetic emission	s						
P10.4	, program	(s):	•	frequency e	electromagnetic field	ds of the following voluntary	/		$\square$
P12	Ergono	nics for computing	g products						
P12.1*	The disp	lay meets the ergor	nomic requirements o	f ISO 9241-	-307 for visual displ	ay technologies.		$\square$	
P12.2*	The phy	sical input device m	eets the requirements	s of ISO 99	95 and ISO 9241-4	10.		$\boxtimes$	
P13		ng and documenta							
P13.1*	Product	packaging material packaging material packaging material	type(s): PE	weight (kg weight (kg weight (kg	g): <b>0.564</b>				
P13.2*	Product	plastic primary pack	aging is free from PV	/C.			$\square$		
P13.3*	For product primary corrugated fiberboard packaging, specify the contained percentage of minimum post-								
P13.4*		media for user and p ronic, 🔀Paper, 🗌	product documentatio Other	on (tick box)	:				
P13.5	Úser and		em if paper documer ation on paper media						
		hlorine-free al chlorine-free							
	Process	ed chlorine-free							
P14		ry programs							
P14.1	The proc	luct meets the requi	irements of the follow	ving volunta	ry program(s):				
		Y STAR® H: <i>Low blue light</i>	Criteria version: 7.0 Criteria version:	0	Date: <b>2018.4.23</b> Date:	Product category: <i>12;13</i> Product category: <i>AIO</i>			
	Eco-labe	el: <b>TCO</b>	Criteria version: 3.0	0	Date:	Product category: AIO			
P15	Addition	al information (Se	e NOTE B10)			0,			
P9	Energy	consumption of sp	ecific configuration	n may vary;	; description of the	e tested product configur	ation:		
	informati knowled	on contained in this ge available at the ti here is approximate	document. All inform	nation provie nd supplier s	ded by supplier in th shall have no obliga	es whether express or imp his document is provided b tion to update such inform a Lenovo Account Repres	ased on supp ation. The inf	olier's format	ion
P9			lotebooks & Tablet C idex.cfm?fuseaction=			tion: rroup&pgw_code=CO			
1									

Annex B1 of ECMA-370 5<sup>th</sup> edition (Lenovo) 2015-04-08

NOTE B10 Additional lines may be inserted to declare further items, by positioning the cursor at the far right of the row and hitting the <Enter> key.

## Legal references Europe Annex B2

Reference	Declaration item
Directive 2011/65/EU (RoHS Directive) * * Specific exemptions apply for certain products and applications.	P1.1
Regulation (EC) 1907/2006(REACH, Annex XVII	P1.2, P1.4, P1.6, P1.7
Regulation (EC) 2037/2000, 2038/2000, 2039/2000 (Marketing and use of Ozone layer depleting substances)	P1.3, P5.3
Norwegian regulation relating to restrictions on the use of certain dangerous chemicals 20.12.2002	P1.5
Directive 2013/56/EC (Battery and accumulators Directive) * * These provisions shall not apply where, for safety, performance, medical or data integrity reasons, continuity of power supply is necessary and requires a permanent connection between the appliance and the battery or accumulator.	P2.1, P2.2, P2,3, P8.1
Directive 2006/95/EC (Low Voltage Directive)	P3.1
Directive 2004/108/EC (EMC Directive)	P3.1
Directive 1999/5/EC (R&TTE Directive)	P3.1
Regulation (EC) 801/2013 amending Regulation (EC) No 1275/2008 with regard to ecodesign requirements for standby, off mode electric power consumption of electrical and electronic household and office equipment, and amending Regulation (EC) No 642/2009 with regard to ecodesign requirements for televisions	P3.1, P3.2
Regulation (EC) No 1272/2008 (CLP Regulation)	P7.19
Directive 2004/12/EC (Packaging Directive)	P5.1
Decision 97/129/EC (Secondary packaging legislation)	P5.2
Directive 2012/19/EU (WEEE directive)	P6.1

# Lenovo ErP Lot3 Information Sheet - PC / Notebook -

As required by COMMISSION REGULATION (EU) No 617/2013 of 26 June 2013 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for computers and computer servers (ErP Lot3).

#### Products scope of this sheet:

Desktop computer, integrated desktop computer, and notebook computer

This document is only valid in connection with the IT Eco Declaration of the specific Product.

Commercial name	Lenovo V330-20 AIO	Logo
Model Number	10UK, 10UL	
Issue Date	2018.5.2	Lenovo
Additional information	ENERGY STAR®,Low blue light	

P7.1.1	Product environmental attributes					
(d)	year of manufacture:				2018	
(e)	Etec value (kWh) per ErP Lot 3 Categor disabled and if the system is tested with				cards (dGfx) are	
(f)	Etec value (kWh) per ErP Lot 3 Categor enable	ry and capability adjus	tments applied when <b>a</b>	II discrete graphics	cards (dGfx) are	
		Category A (according to ErP Lot 3)	Category B (according to ErP Lot 3)	Category C (according to ErP Lot 3)	Category D (according to ErP Lot 3)	
	Memory over base [GB]		4		32	
ents sting	Additional internal storage	(Yes / No)	No (Yes / No)	(Yes / No)	No (Yes / No)	
capability adjustments applied during testing	Discrete television tuner	(Yes / No)	No (Yes / No)	(Yes / No)	No (Yes / No)	
ability a	Discrete Audio Card	(Yes / No)	No (Yes / No)	(Yes / No)	No (Yes / No)	
app	Discrete graphics Card(s) [number / #]	#: (Yes / No)	No #: (Yes / No)	# <u>:</u> (Yes / No)	No #: (Yes / No)	
	Category of discrete graphics Card(s)		1		/	
esults	Etec Value (kWh) - dGfx disabled all discrete graphics cards (dGfx) are disabled/ UMA is active for switchable graphics/ product has no graphics cards (dGfx)		52.63		52.63	
Test results	Etec Value (kWh) - dGfx enabled all discrete graphics cards (dGfx) are enabled		/		/	
(g)	Idle state power demand (Watts);	<u> </u>			13.45	
(h)	Sleep mode power demand (Watts);				1.78	
(i)	Sleep mode with WOL enabled power de	emand (Watts) (where	enabled);		1.78	
(j)	Off mode power demand (Watts);				0.66	
(k)	Off mode with WOL enabled power dem	and (Watts) (where en	abled);		0.98	
(I)	Internal power supply efficiency at 10 %	, 20 %, 50 % and 100	% of rated output pow	er (if applicable):		
	10% 20% 50%	100% Avera	age			
(m)	External power supply efficiency (if appli	cable)*:				
	Average active efficiency: 120w 89.80%	6				
	*internal note: show values for all available external p					
(o)	Minimum number of loading cycles that	the batteries can withs	tand (applies only to n	otebook computers):	N/A	
(p-1)	Measurement methodology used to dete	ermine information mer N/A	ntioned in points (I) – ir	nternal PSU efficiency	:	
(p-2)	Measurement methodology used to determine information mentioned in points (m) – external PSU efficiency: refer to EN 50563:2011 External a.c. – d.c. and a.ca.c. power supplies					

(p-3)	Measurement metho	dology used to determine information mentioned in p N/A	points (o) – loading cycles batteries:	
(p-4)	power as defined in I	dology used to determine information mentioned in r Point P9.1 in the Product IT Eco Declaration: 3:2013-Desktop and notebook computers- Measu		
(q)		or achieving a stable condition with respect to power ased on user manual/Power on->Wait 5 minutes-		
(r)		eep and/or off mode was selected or programmed: ed on user manual/Begin menu -> Power -> Select	ct sleep or off mode	
(s)	Sequence of events off mode:	required to reach the mode where the equipment au	tomatically changes to sleep and/or	
		anual/Control Panel->Power Options-> Change S for this plan	ettings-> Restore default settings	
(t)	condition which does	te condition before the computer automatically re- not exceed the applicable power demand requirement	ents for sleep mode (in minutes):	25 minutes
(u)	-	r a period of user inactivity in which the compute ver power demand requirement than sleep mode (in	•	
(v)		re the display sleep mode is set to activate after		10 minutes
(w)		nergy-saving potential of power management functio N/A		
(x)	User information on	how to enable the power management functionality:		
( )		firm where or which document will show user in power management functionality.		
(z)		measurements: — test voltage in V and frequency in system, — information and documentation on the in- sting: Test voltage in V and frequency in Hz: 23 Total harmonic distortion of the electricity suppl	strumentation, set-up and circuits 0V/50Hz	
Additio	onal Notebook Batter	y Information:		
		Battery[ies] not user replaceable	Battery[ies] user replaceable	n/a
		The battery[ies] in this product cannot be easily replaced by users themselves. <sup>1)</sup>		
Internal	l/built-in Battery			
Externa	al/detachable Battery			
Bios Ba	ackup Battery			
Other:	Other:			
Addition	nal information			
Акумулатор Las baterías Výměnu ba Brugeren ka Der Akku/di	рната[ите] батерия[и] в този s de este producto no pueden terie/baterií v tomto výrobku b an ikke uden videre udskifte ba	easily replaced by users themselves. продукт не може да се замени[ят] лесно от самите потребите ser sustituidas fácilmente por los propios usuarios. y neměli provádět sami uživatelé. titeriet/batterierne i dette produkt. vkönnen nicht ohne weiteres vom Benutzer selbst ausgetauscht		

H μπαταρία[-ες] στο προϊόν αυτό δεν μπορούν να αντικατασταθούν εύκολα από τους ίδιους τους χρήστες La/les batterie(s présente(s) dans ce produit ne peuvent être facilement remplacée(s) par les utilisateurs eux-mêmes. Korisnik ne može lako zamijeniti Bateriju sam u ovom proizvodu.

Końsnik ne może lako zamijeniti Baterju sam u ovom proizvodu. La batteria/le batterie in questo prodotto non può/possono essere facilmente sostituita/e dall'utente. Lietotāji paši nevar nomainīt šā ražojuma akumulatoru(-us). Šio gaminio baterijos [bateriju] pats vartotojas negali lengvai pakeisti. A termék akkumulátorát/akkumulátorait a felhasználó nem tudja egyedül egyszerűen kicserélni. II-batterija/batteriji f'dan iI-prodott ma tistax/jistgħux tiġi/jiġu sostitwita/i mill-utenti stess. Batteriet [ene] i dette produktet kan ikke lett erstattes av brukerne selv.

De batterij(en) in dit product is (zijn) door de gebruiker niet gemakkelijk vervangbaar. Użytkownik nie może sam w łatwy sposób wymienić baterii w tym produkcie. A ou as baterias deste produto não podem ser facilmente substituídas pelos próprios utilizadores.

Bateria (bateriile) din acest produs nu poate (pot) fi usor înlocuită (înlocuite) de utilizatorii înșiși. Bateria (bateriile) din acest produs nu poate (pot) fi usor înlocuită (înlocuite) de utilizatorii înșiși. Baterij/baterije v tomto výrobku nemôže vymieňať používateľ. Baterij/baterije v tem izdelku uporabniki sami ne morejo zlahka zamenjati.

Tämän tuotteen akku [akut] ei[vät] ole helposti käyttäjän vaihdettavissa.

Det är inte enkelt för kunden att själv byta ut batteriet/batterierna.

Bu üründeki batarya(lar) kullanıcılar tarafından kolaylıkla değiştirilemez.