## Procedure LEM2

(input: a set B,
output: a single local covering $\mathbb{T}$ of set $B$ );
begin
G:=B;
$\mathbb{T}:=\varnothing$;
while $G \neq \varnothing$
begin
$\mathrm{T}:=\varnothing$;
$T(G):=\{t \mid[t] \cap G \neq \emptyset\} ;$
while $T=\emptyset$ or $[T] \nsubseteq B$
begin
select a pair $t \in T(G)$ with the highest attribute priority,
if a tie occurs, select a pair $t \in T(G)$ such that $|[t] \cap G|$ is maximum;
if another tie occurs, select a pair $t \in T(G)$ with the smallest
cardinality of [ t ]; if a further tie occurs, select first pair;
$\mathrm{T}:=\mathrm{T} \cup\{\mathrm{t}\}$;
$\mathrm{G}:=[\mathrm{t}] \cap \mathrm{G} ;$
$T(G):=\{t \mid[t] \cap G \neq \emptyset\} ;$
$\mathrm{T}(\mathrm{G}):=\mathrm{T}(\mathrm{G})-\mathrm{T}$;
end \{while\}
for each $t$ in $T$ do
if $[\mathrm{T}-\{\mathrm{t}\}] \subseteq \mathrm{B}$ then $\mathrm{T}:=\mathrm{T}-\{\mathrm{t}\} ;$
$\mathbb{T}:=\mathbb{T} \cup\{\mathrm{T}\} ;$
$\mathrm{G}:=\mathrm{B}-\bigcup_{\mathrm{T} \in \mathbb{T}}[\mathrm{T}] ;$
end \{while\};
for each T in $\mathbb{T}$ do
if $\bigcup_{S \in \mathbb{T}-\{T\}}[S]=B$ then $\mathbb{T}:=\mathbb{T}-\{T\} ;$
end \{procedure\}.

